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ABSTRACT

The purpose of this study was to provide an introductory analysis of the content of the Web sites of botanical and horticultural libraries in the United States to determine what types of resources and information is included, whether or not information is organized and accessible, and to what extent botanical and horticultural libraries are using the Web to exhibit rare book collections. The population for this study included libraries with membership in the Council on Botanical and Horticultural Libraries as well as libraries listed in "The Directory of Special Libraries and Information Centers" whose primary subject scope covered botany, horticulture and related subjects. Thirty-seven Web sites were evaluated, and data were collected assessing background information, authority/currency/accuracy, features to promote indexing by search engines, navigation/functionality, organization/format, access for different browsers/systems, access for different user groups, basic library information, and additional features. Comparisons were made based on parent organization type, collection size and number of pages in each site. Results showed that most sites provided information on collections, hours, contacting the library, and services and policies, but less than half included link lists or mission statements. Service information and additional features present varied by library type. Lose frequencies in most of the design categories indicated that many of the libraries were not following design recommendations for organization and accessibility. The inclusion of rare book exhibits by eight of twenty-two libraries mentioning a rare book collection suggests that United States botanical and horticultural libraries have only begun to use the Web for this purpose. Appendices include the data collection instrument, frequency tables, library Web sites evaluated, and library type categorizations. (Contains 32 references.) (AEF)

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ED 449 817

A CONTENT ANALYSIS OF U.S. BOTANICAL AND HORTICULTURAL LIBRARY WEB SITES

A Master's Research Paper submitted to the
Kent State University School of Library
and Information Science
in partial fulfillment of the requirements
for the degree Master of Library and Information Science

by

Michele M. Meyers
April, 2000

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CHAPTER 1
INTRODUCTION

1.1. Background

A lot has been written about the impact of the World Wide Web on libraries. A library's web presence can be a major point of contact with its clientele and has the potential for improving and expanding access to information. It can enhance the "publicity, visibility and credibility" of the library and has enabled librarians to apply traditional skills like organization and evaluation to add structure, meaning and "stability" to the rapidly expanding number of internet resources (Garlock and Pointek 1996, 1999; Stielow 1999). In addition, the web presents the opportunity to increase access and support preservation through digitization of special collections and fragile rare materials (Lesk 1997; Stover 1997).

The Council on Botanical and Horticultural Libraries (CBHL) is the major international association devoted to the "development, maintenance and use of libraries of botanical and horticultural literature" (CBHL 1999a). Among the core values included in its revised draft list are a commitment to the "collection, preservation and dissemination of botanical and horticultural information." A key strategy for advancing this goal is to "ensure long-term preservation of botanical/horticultural collections and information" (CBHL 1999c).

CBHL has recognized the importance of the web as an avenue for improved access, communication and cooperation by establishing its Electronic Communications Committee to promote electronic resource sharing through the CBHL site. The committee's work has also included an ongoing internet column that discusses web

sites covering specific botanical and horticultural topics of interest to member libraries and their patrons.

Despite this awareness of the role and importance of the web, little attention has been devoted to the development of member library web sites. A preliminary examination of member libraries linked to the CBHL site, conducted during June 1999, revealed that of the 61 library links listed, 22 led to the parent institution's site but were not devoted to the library. Of the remaining 39 institutions, 10 had only a single page devoted to the library.

1.2 Research Objectives

The purpose of this study was to determine the elements included in U.S. botanical and horticultural library web sites, to evaluate the sites based on current design recommendations, and to compare results based on library type in order to provide a resource for future site development. More specifically, this study attempted to answer the following questions:

1) What types of information/resources are included in botanical and horticultural library web sites?

2) Are these resources clear, organized and easily accessible?

3) Are botanical and horticultural library web sites being used to showcase special collections and rare materials?

4) Do botanical and horticultural library web sites include basic design features that promote access for a variety of users?

5) Do botanical and horticultural library web sites include basic information required in any library web site?

1.3 Definition of Terms

For the purposes of this study, the following definitions were used:

- Library web site: a web presence comprised of at least a single full page devoted to the library.
- Home page: the index or opening page of a site. This page should provide access to and information on all linked pages that make up the site.
- Botanical and horticultural library: any library whose primary subject scope covers botany, horticulture or related/subtopics including herbs, plants, trees, arboreta, botanical gardens, herbaria, herbs, flowers, plant diseases, plant genetics, fruits & vegetables, palynology, gardening, and weeds, as determined by name of library, subject classification included in *The Directory of Special Libraries and Information Centers*, or collection information available in the library's web site.

1.4 Limitations, Delimitations and Significance

When approaching the content analysis of web sites, there are many options. Although this paper addresses major design features, the scope of this project prevented a comprehensive examination of all facets of web site content. The examination was limited to features outlined in the methodology, and did not include a

detailed analysis of all aspects of libraries' web catalog interfaces, linked web databases or linked rare book sites.

In addition, the study was limited to sites originating from libraries whose primary subject scope covered botany and/or horticulture and excluded CBHL libraries with collections that are primarily agricultural or broad in nature. Subject coverage was determined by the researcher based on information available through each library's web site linked to the CBHL member library page and library statistics available in *The Directory of Special Libraries and Information Centers*. Because CBHL membership is open to institutions and individuals interested in preserving and promoting access to botanical and horticultural literature, membership alone does not guarantee a collection focusing on botany and horticulture. The intent of this study was to examine the web sites of U. S. libraries with a botanical/horticultural focus. It was not intended to be an analysis of all CBHL member libraries nor all libraries with any type of botanical or horticultural collection.

Another limitation is mentioned by Plank in her 1997 study and is applicable to this and most other web site analyses. Data was accumulated based on observations made during the time frame of the evaluation and may not reflect any changes made to the sites during or following the preparation of this paper (Plank 1997).

Results from this study should fill a gap in the literature by providing an introductory analysis of U.S. botanical and horticultural library web sites. It will aid in site development for botanical and horticultural libraries with no current web presence and will provide information useful to libraries with existing but limited sites.

CHAPTER 2
LITERATURE REVIEW

Any analysis of library web sites requires an examination of the literature devoted to the type of library in question, in addition to the literature covering web design and evaluation. A review of the literature revealed little current published research on botanical and horticultural libraries, but an abundance of literature relating to web site design and evaluation.

In her 1991 study, Pamela Pirio conducted a survey of education libraries in botanical gardens addressing age, staffing, formats collected, users, and methods of self-promotion. Pirio stressed the need for botanical garden education libraries to "provide" teachers and students with "readily available information" (Pirio 1992). This study was too early to address the role of web sites in these libraries.

The most recent published study of CBHL member libraries was completed by Clewis in 1989. Clewis conducted an exploratory survey of 51 CBHL member libraries in the United States to determine the type of library, primary user groups, services, online databases used, size and educational/professional background of library staff, participation in networks and consortia, and subjects/formats included in library collections. Her study excluded member libraries with an agricultural or general focus. Results showed that CBHL libraries included botanical gardens, arboreta, parks, horticultural societies, universities, museums and "general libraries" with a botanical focus. Collections included slides, pamphlets, nursery and seed catalogs, art, rare books, maps, vertical files, audio tapes, video tapes, microforms, and photographs, in addition to books, periodicals, and "locally produced" and commercial databases. Subject scope of collections varied by library type but most collected materials on

horticulture, botany, landscape design, and gardening. At the time of the study, 72% were involved in networks or consortia and many respondents "stressed the importance of cooperation to libraries with limited resources." User groups included parent organization staff, the public, gardeners, students and scholarly researchers (Clewis 1989). Although Clewis's study is not current, it does reflect the diverse needs, services, and collections of botanical and horticultural libraries. Like the Pirio study, it was too early to assess the role of the World Wide Web in the libraries examined.

A 1998 study by Guillaume focused on a specific CBHL library, the Corning Library at the Holden Arboretum. This study compiled a history of the library and an outline of its collections. Findings support some of Clewis's earlier conclusions by revealing a collection covering a range of subjects and formats related to botany, horticulture, and natural history, and diverse user groups including staff, the public, and local schools (Guillaume 1998).

Much of the remaining literature is not research-oriented, but profiles the collections and services of a limited number of individual libraries. In "The Stupp Teacher Resource Center at the Missouri Botanical Garden," Pirio describes a library including botany, horticulture, ecology and environmental subjects and focusing on elementary education (Pirio 1993).

Needham, DeCandido, Thorner, Gordon, and Weisman describe the collections, services, and user groups of the libraries of the New York Botanical Garden and the Garden Center of Greater Cleveland. All describe user groups including researchers and the public and stress the significance of rare materials and the preservation issues

they create (Needham 1991; DeCandido 1995; Gordon 1994; Thorner 1988; Weisman 1987). None of the articles is more current than 1995.

The CHBL XVI International Botanical Congress's symposium, "Towards an International Plan for Preserving Botanical Documentation: Critical Problems and Potential Solutions" provides some current information on the impact of the World Wide Web on botanical and horticultural libraries. Some of the issues discussed at the symposium included the potential for preserving botanical collections through electronic means and the need to create "international conservation and acquisition priorities" for both traditional collections and the information available through the web (CBHL 1999d).

From the review of the literature and the author's personal observations working in 2 botanical/horticultural libraries (the Corning Library at the Holden Arboretum and the Herb Society of America Library) it is clear that botanical and horticultural libraries can vary dramatically in size, scope, nature of users, and type of parent institution. They can collect a variety of formats and subjects, often have significant rare book collections, and may deal with diverse user groups including educators, researchers, organization staff/members, and the general public. Although no research could be located pertaining to web site development in botanical and horticultural libraries, the literature review does help define the nature and needs of these libraries and provide the background information necessary for an effective web site evaluation.

The literature on web design and evaluation is abundant and can be divided into several categories: general web design and development, library web design, and web site evaluation. Although there are a wide variety of design recommendations in the literature, criteria for web site evaluation are relatively consistent across many different

sources. Most of the evaluation criteria cover site purpose and audience, authority of source, content accuracy and comprehensiveness, currency, appropriateness of graphics and style, functionality of links, and ease of navigation. Sites must include information on author with an email link, no dead links, clear organization, ease of navigation, and frequent updates (Jacobsen and Cohen 1996; Grassian 1997; Smith 1997; Metz 1999). Although these criteria were not developed for evaluation of library sites in particular, they provide universal recommendations that serve as a good starting point for any web site content analysis.

A 1998 study by D'Angelo and Little examined the design recommendations of 200 published sources and evaluated 20 sites based on their findings. The authors discovered that the vast majority of web design literature is not research-based and is rooted in "opinion." Design recommendations covered directory information, navigation, and use of images, color, white space, fonts, sound, video and media. Of the 50 recommendations found in the study, the authors chose 10 characteristics to evaluate the 20 sites used in the study. "Visual characteristics" included use of upper and lower case, headings and subheadings, a single font size, and appropriate white space. "Practical considerations" included use of less than 4 images and no more than 4 colors per page. Findings revealed that although 73% of sites followed practical considerations, only 58% followed visual recommendations (D'Angelo and Little 1998).

In their book, *Information Architecture for the World Wide Web*, Rosenfeld and Morville provide many suggestions for effective web site design. They discuss different types of organizational schemes, stressing the importance of a "well-designed hierarchy" that facilitates site navigation and access and makes the site's information

"meaningful" to users. Some of their recommendations include: inclusion of a site map, index or "guided tour," preferring hierarchical to hypertext "web" structures for linking pages in the site, using controlled vocabulary for site labels and headings, and including scope notes to inform users of content included under different sections of the site. Search engines within sites are only suggested if sites are large or contain rapidly changing information. Other considerations include use of <meta> tags and <title> tags to ensure proper indexing by search engines, providing consistent graphics and logos, and including <alt> tags for any graphical navigation bars to provide access for browsers without image loading capability (Rosenfeld and Morville 1998).

Lemay includes similar recommendations in her book, *Teach Yourself Web Publishing with HTML 4 in 21 Days*. Some of her suggestions include using lists and headings to make information easy to scan, providing consistent page layout, and including <alt> tags with images to facilitate accessibility through non-graphical browsers (Lemay 1998).

Several sources are devoted exclusively to library web site design. Garlock and Piontek outline some content possibilities. These include description of collections, hours, services, events, a library newsletter, floor maps, and personnel information. In addition to these basics, the library site can be used to showcase special collections by "displaying exhibits," possibly using multimedia. Sites can also include interactive forms for circulation, ILL and "ready reference" as well as search engines, and subject directories of internet resources available through WWW, FTP and gopher. The authors stress the importance of an organization scheme for the site's resources and suggest that schemes can be traditional library classification like DDC or Library of Congress, or

can be a locally developed scheme. The authors underscore the need to customize the content of the site to the needs of users (Garlock and Piontek 1996). Accommodation of disabled users is possible by including audio files for the vision-impaired (Garlock and Piontek 1999).

Rautanen provides similar library web site recommendations. The library home page can include links to the page of the parent organization, online databases, other libraries, staff, services, collections information, and even directions to the library. Rautanen mentions the importance of an index for large sites and designs that are functional in multiple browsers (Rautanen 1997).

Several studies have been published pertaining to library web sites. In a 1996 study, Clyde performed a content analysis of the home pages of 50 public and 50 school libraries. Clyde determined that content varied depending on purpose and users of the site, but isolated 10 criteria that should be included in most library sites, regardless of audience or purpose. These included descriptive titles to promote indexing by search engines, few enough images to promote quick page "transmission," library name and directory information, information like free internet resources to attract new users (if applicable), timely information like book reviews or new materials listings to encourage old users to return, some text in English if international, working links to other related sites, online catalog access through telnet, gopher or web interface, means of contacting library staff, update information, and links on each page to the library home page (Clyde 1996).

In a recent published study, Clausen evaluated 12 Danish academic library web sites based on 40 criteria covering the categories of "design and structure," "quality of

information," "links and navigation," "aesthetic impression," "miscellaneous," and "general assessment." Although the evaluation criteria included many of the traditional evaluation elements mentioned earlier in the literature review, it also required opinions of evaluators on site originality, professional appearance and user-friendliness. All of the libraries in the study were deficient in criteria from each major category (Clausen 1999).

Although there have been no studies pertaining to botanical and horticultural library web sites, a content analysis of United Kingdom agricultural web sites was completed by Craig. This study examined 132 sites produced by colleges, research institutions, government agencies, associations and commercial organizations based on 26 criteria covering inclusion of directory, organization and staff information, available online resources, links, event information, search capability, "what's new" sections, updates, and availability of help. One of the more interesting findings was that only a small number of the sites studied included information on site contents, audience or how to locate information (Craig 1999). This study is significant since some of the sites examined were largely horticultural in nature. None of the sites originated from libraries, however, and results were not broken down by subject scope.

CHAPTER 3
METHODOLOGY

A content analysis of U.S. botanical and horticultural library web sites was performed taking into account selected aspects of both surface and technical content. The target population for this study was all U.S. libraries with a botanical or horticultural

focus. The accessible population consisted of libraries listed in the CBHL 1999 membership directory, linked to the CBHL web site as of January 9, 2000, or listed in *The Directory of Special Libraries and Information Centers* under the subjects of botany, horticulture, and related subjects/subtopics including herbs, plants, arboreta, trees, botanical gardens, herbs, herbaria, flowers, plant diseases, plant genetics, fruits and vegetables, botany--classification, palynology, weeds, and gardening.

Three-hundred entries in *The Directory of Special Libraries and Information Centers* were examined. Libraries were considered to be within the prescribed subject scope if the majority of subjects listed pertained to botany, horticulture, or related/subtopics, or if the name of the library suggested a botanical or horticultural focus. Agricultural and general libraries were excluded.

Of the 300 entries in the directory, 120 met the inclusion criteria. Because URLs listed in the directory could represent library or parent organization sites, it was necessary to verify URLs. Many entries in the directory did not list a URL. To account for sites that had been established after the publication of the directory, searches were performed using the Infoseek and Dogpile search engines during the week of January 2, 2000. Search results indicated that only 33 libraries had a web presence of 1 page or more. Four additional library sites were added from the CBHL membership directory and web site for a total population of 37 sites.

It should be noted that herbarium sites mentioning no non-specimen collections were excluded from the study, as were 1 plant clinic and 1 plant center that did not explicitly mention or identify themselves as libraries. The Herb Society of America Library web site went online during the course of this study but was excluded since the

researcher is responsible for the site's design and maintenance. The web site for the Eleanor Squire Library of the Cleveland Botanical Garden could not be included in the evaluation because it was under construction and unavailable during the course of the evaluation. The main library for the Botanical Research Institute of Texas did not have a web site at the time of the evaluation, but BRIT's children's library, the Oliver G. Burk Library was included in the evaluation.

A pilot study was conducted on January 11 and 12, 2000, using 5 sites from the population. The final study was conducted over a period of 16 days from January 24 to February 8, 2000.

Data Collection Instrument

The coding form was developed taking into account web site recommendations suggested in the review of the literature. Due to the large quantity of information on this topic, suggestions found in multiple sources were given priority. Only criteria deemed relevant to botanical and horticultural libraries were considered. General web site evaluation criteria were included as well as recommendations specific to libraries. The focus of the criteria selected for this evaluation was the ability to ensure and increase access to information/resources in the library since a primary goal of a library web site is to improve access to the library's staff, collections and services. Rather than focusing extensively on design, this study evaluated a few basic design features that can have the potential to impact user access to a site and its information.

The coding form is divided into 9 sections: background information, authority/currency/accuracy, features to promote indexing by search engines,

navigation/functionality, organization/format, access for different user groups, access for multiple browsers/systems, basic library information, and additional features.

The background information section includes data about the date and time of access, page count, mention of rare book collection, mention of multiple user groups, and type of library. Library types were adapted from those developed by Clewis in her 1989 study. This section addresses research question no. 1 and provides the background information necessary for comparative analysis. Assignment to categories was made by the researcher based on information available in each library's web site and may therefore not reflect perfect categorizations. Only main or branch libraries of colleges and universities were considered to be academic. Libraries affiliated with academic libraries were not placed in this category. Many of these libraries were assigned to a separate category, institutes/research centers.

The authority/currency/accuracy section covers fundamental qualities like author identification, update frequency and spelling accuracy that are essential for any web site. This section addresses research questions no. 2 and no. 5. Judgments regarding author identification, author email link, update date, copyright notice, and link to parent organization site were made based on information available in the library's home page and did not take into account the presence of this information on subsequent pages in the site. The site's author was judged to be identified if a person or organization was clearly listed as the responsible party either by an explicit statement of responsibility or copyright notice. Spelling and typographical errors were assessed by closely proofreading up to 15 pages of the site. External link function was evaluated by checking up to 50 links. Only links producing "404 - not found" errors were considered

to be non-functional since other types of errors can result from problems with the server on which the linked site resides.

The navigation/functionality section includes basics like link function and navigational buttons, and also includes features like availability of help, an internal search engine, and site map/index/guided tour, which aid in the navigation of the site. A site was judged to have an index or table of contents (TOC) page if it included a TOC frame or image map or a list of links representing major categories found in the site. Site maps or detailed site indexes were distinguished as listings of all major site categories and their contents. Although the presence of navigational links was evaluated for each page, this study did not take into account the type or quality of these links, excepting the link to library home, which was assessed separately. Internal links included links between pages, anchors, and links to the parent organization present on the library's site. Although for many of the larger sites it was not possible to check every internal anchor and link, enough internal links were followed to view each page in the site. This section pertains to research questions no. 2 and no. 4.

The organization/format section assesses the site's consistency and layout and includes use of lists, descriptive heading tags, library name or logo on each page, and consistent use of colors and backgrounds. This section of the evaluation only took into account actual <h> tags and the use of ordered, unordered or definition lists (<ol>, <ul>, <dl> tags) and did not assess graphical approximations of these elements or the use of font size to replace actual headings. This section addresses research question no. 2.

A related section, access for different browsers/systems, evaluates the sites' functionality using 2 browsers, Internet Explorer 5.0 and Netscape 4.0. Also included in

this section are the use of <alt> tags with navigational graphics, inclusion of a no-frames option if frames are used, and text-only option. Sites were not considered to include frames if the library page was accessible separately from the parent organization's frame and was not linked directly back to the frame.

Elements like metadata, and <title> tags are covered in the features to promote indexing by search engines section since proper indexing of a site affects the ability of users to access it. Metadata and <title> tags were evaluated based on the library's home or index page only. Only subject content related metadata was considered, and <title> tags were judged to be descriptive if they mentioned the name of the library. These two sections address research question no. 4.

The access for different user groups section includes audio for the vision impaired, multiple language option, and subject guides for different user groups. Subject guides were defined as link listings arranged by topic and/or bibliographies of print resources arranged by topic. User groups had to be explicitly mentioned in association with any guides to receive a positive mark in this category. This category was considered not applicable if the library web site did not mention the library's user groups or if it did not indicate multiple user groups. This section addresses research question no. 4.

The basic library information section assesses the inclusion of the minimum required informational content. Since libraries in the study originate from different types of institutions, only information that would apply to most libraries regardless of type was included in this section. Directory-type data like staff, hours, contact information, collection description, services/policies, URL, email link, user groups and mission

statement were included in this category. Link list/subject guides for internet resources was also included in this section since a primary role of the library web site is to provide access to web resources. In addition, the presence of annotations and an explanation of the classification scheme for the links was also assessed. This section addresses research questions no. 1 and no. 5.

The additional features section evaluates the provision of access to online databases and electronic journals, catalog interfaces or links, bibliographies/subject guides for print resources, the availability of online reference, the use of print and interactive forms, library images and maps, and "what's new" information. This category also includes an assessment of the role of the library web site in exhibiting rare book collections and addresses research questions no. 1 and no. 3. Rare book exhibits were defined broadly as any images and text from materials identifiable as rare or belonging to special collections. Judgments were made from information available in each site.

Page counts for each site were made to the best ability of the researcher. In cases in which the library site linked to or shared pages with a parent organization site, these pages were not included in the page count or style/technical design evaluation, but the library site was evaluated as providing access to the resources included in the linked pages. This evaluation did not take into account all information linked to the library page through parent organization image maps or frames. Only information accessible directly from the library page was considered. Information available by following a series of links into the parent organization site was not included in the results.

CHAPTER 4
DATA ANALYSIS

Data analysis was completed using Microsoft Access and Excel. To reduce coding error, data from the coding forms was entered into Access and rechecked for errors. Frequencies and percentages were calculated for all categories and averages were computed for each section of the coding form. For categories with N/A data, percentages reflect results for the total number of sites for which the category was applicable.

Results were sorted by type of library, size of collection, and selected portions of the criteria were sorted by number of pages in the site. It was necessary to sort by library type since botanical and horticultural libraries originate from many different types of organizations and may therefore have different web site requirements and needs. Distinguishing between sites of different sizes was required since page count would impact whether features like site maps, help options and search engines were necessary. Results were also compiled based on collection size to determine if there was any relationship between library size and site contents.

For each frequency table, section averages were calculated from cumulative category percentages. In cases in which all categories would not apply to all sites, only selected features were included in the calculation. These are identified in the frequency tables with an asterisk. It should be noted that section averages are an assessment of sites as a group and do not reflect the distribution of features in a given section for individual sites.

Results

The majority of sites in the study originated from botanical gardens (11, or 30%) and academic libraries (10, or 27%), followed by arboreta (7, or 19%), institutes/research centers (7, or 19%), societies/associations (5, or 14%), museums (5, or 14%) and herbaria (2, or 5%). The sum of the percentages is greater than 100 since some sites fell into more than 1 category. See appendix D for a list of library type categorizations.

Page counts ranged from 1 to 209, with a mean of 15.16 and a mode of 1. Of the 13 1-page sites in the study, the largest number (6, or 46%) originated from botanical gardens, and 4 (31%) originated from societies/associations. All the remaining library types had a single 1 page site, except institute/research centers, which had none.

One of the academic library sites was a central web site for 5 botanical libraries. It was evaluated as a single site rather than as 5 separate sites. One arboretum library had 2 separate web sites, 1 for the main library and 1 devoted to the rare book collection. These were evaluated separately.

In terms of authority, currency and accuracy, results were mixed. Although 73% of sites identified the site's author, only 51% included an author email link. The majority included a link to the parent organization (94%) and had correct spelling (77%), but less than half included a copyright notice (41%) or provided the date of update (49%). Only 3 sites (8%) indicated that the site had been updated within a month of the date of access. In addition, only 50% of the sites had functioning external links. This category was not applicable for the 13 sites (35%) with no external links. Academic libraries had

the highest overall average percentage for this section (73%) and herbarium libraries had the lowest (57%).

In the features to promote indexing by search engines section, 84% of libraries had descriptive <title> tags but less than half included metadata (46%). Not surprisingly, the lowest overall average percentages for this section were associated with sites of 1 page and sites between 2 and 5 pages. Many of these sites proved to be more sections of parent organization sites rather than true, separate library web sites. Arboretum libraries and society/association libraries had the highest overall average percentages for this section (71% and 70% respectively), and herbarium libraries had the lowest (50%).

Only 65% of sites had navigational links on each page. This low number is not due to the large percentage of single page sites in the population, since 69% of these sites included navigation links. This category was not made N/A for 1 page sites since these sites could include navigational anchors. The lowest percentage for this category (55%) was associated with the largest sites (10 pages and up). An even more problematic finding is that only 60% of the sites included a link to the library home page on each page. One library had 2 pages on its parent organization's site that were not directly linked together.

Although only 46% had a simple index page or table of contents, the larger sites were more likely to include this feature (80% of sites with 6 to 9 pages, and 82% of sites with 10 or more pages). Despite the fact that 11 sites included 10 or more pages, none of them had a full-fledged site map. The only site that did have a site map was an institute library falling in the 6 to 9 page range. None of the libraries in the study

included a guided tour or a help option. Overall, museum libraries performed best in the navigation/functionality section with an average of 78%. Averages for this section were computed based on only the most basic features: the presence of navigational links on each page, the functionality of internal links, and link to the library home page on each page of the site. Limiting the assessment to these features illustrated the sites' base functionality and made the equitable comparison of different sized sites possible.

The highest frequency in the organization/format section occurred in the consistent style category (76%), and 68% of sites included the library name or logo on each page. Categories pertaining to organization within pages had lower percentages with only 49% of the sites utilizing lists and 46% including descriptive <heading> tags. Academic libraries had the highest average percentage for features in this section (68%), and botanical garden libraries had the lowest (50%). Libraries with sites consisting of 10 or more pages had the lowest average percentage for organization/format (52%).

Although 78% of sites included tables and 73% included navigational graphics, only 1 site had a text-only option. On the other hand, 74% of the sites with navigational graphics included <alt> tags or text links. Two of the sites did not function properly in both browsers. Society/association library sites had the highest overall average percentage in the access for different browsers/systems section (75%).

None of the sites in the study included any features in the access for different user groups section. Even though 3 sites mentioned international users, none had an option for languages other than English. None had audio for vision impaired users, and even though 23 (62%) of the sites mentioned multiple user groups, none provided

subject guides expressly identified as being targeted to the different groups. Three (8%) of the sites included information on library accessibility for the disabled, but it pertained to access to the physical libraries and not their web sites.

The most common basic library information included in the sites was description of the collection (89%), contact information (92%) and hours (84%). For contact information, only 43% included fax number, but the majority of libraries included phone (84%), address (76%) and email address (73%). Less frequent but still common were indication of user groups (68%), email link to contact staff (70%), and information about library services and policies (70%). On the other hand, only 54% of the libraries included staff information, 19% listed the site URL, and 16% included a mission statement.

Arboretum and academic libraries had the highest overall average percentages as a group for basic library information (66% each), and herbarium libraries had the lowest total average with 45%. Although only 6 libraries (16%) included a mission or purpose statement, 25 (68%) indicated their user groups. Explicit mission statements were most common in museum libraries (2 of 5, or 40%).

The top 5 services mentioned were circulation (54%), photocopy policy (32%), reference (32%), interlibrary loan (24%) and access to the collections (22%). Academic libraries, as a group, included information on more services and polices than the other library types (18). Arboretum libraries listed 16, botanical garden libraries listed 15, institute/research centers listed 14, museum libraries and society/association libraries listed 6, and herbarium libraries listed 4. See tables in appendix B for complete listing of services and policies frequencies and percentages by library type.

Only 15 (40%) of the sites included a subject guide or link list for internet resources, suggesting that even though these libraries have established a web presence, many are still not fulfilling a basic function of the library web site, providing access to web resources. Link lists were most common in academic libraries (6 of 10, or 60%) and museum libraries (3 of 5, or 60%) and were least common in society/association library sites (1 of 5, or 20%). Only 53% of libraries with link lists included annotations and none provided any explanation of the classification scheme used to categorize the links.

In terms of additional features, the most prevalent were access to databases and web catalog interface or link (43% each). Telnet catalog links were present in 4 (11%) of the sites. Only 16% had a new book list, and only 21% had other "what's new" information. No library had both. This, combined with the small percentage of sites that were recently updated suggests that the majority of the libraries in the study were providing little current information to promote use of their web sites.

Although none of the libraries included a library map, 15 (41%) included an image of the library, and 9 (24%) included directions or a map to the library. Twelve (32%) provided access to e-journals and 16 (43%) provided access to databases, but the frequencies for the access to databases category was much higher for academic (90%) and herbarium libraries (100%) than for any of the other library types. Only 5 (14%) of the sites included subject guides or bibliographies for print resources.

Most of the sites did not utilize print or interactive forms, although it should be noted that this category only assessed the use of interactive forms for purposes other than search engines or online catalog interfaces. Interactive forms that were present

were used for reference, materials requests and email, while printable forms were for reserves and publications ordering. Society/association libraries and museum libraries had the highest incidence of interactive forms (2 of 5, or 40% for each), while academic libraries had the largest percentage of printable forms (2 of 10, or 20%). Botanical garden and herbarium libraries had no forms.

Nine libraries (24%) explicitly mentioned available online reference in their web sites, although 26 (70%) included an email link for staff, which could imply the availability of online reference. None of the sites included password protected sections in the main site, although 1 library categorized as arboretum and academic linked to a separate subscription plant information site developed in part by the library, and some of the sites linked to e-journals and databases that required a password for access. The evaluation did not distinguish between password protected and freely accessible databases and e-journals.

Other prevalent additional features uncovered by this study were information on library history (9 sites, or 24%), and archives information (6 sites, or 16%). In addition, 3 sites (8%) included online archival finding aids. Academic libraries, as a group, included the most additional features (24), followed by botanical garden libraries (23), institutes/research centers (21), arboretums (18), society/association libraries (16), museum libraries (16) and herbarium libraries (11). See tables in appendix B for complete listings of additional features frequencies and percentages for all libraries and by library type.

Although 22 library sites (59%) mentioned a rare book collection, only 8 (22%) included some form of rare book exhibit. Exhibits were most common in herbarium

library sites (1 of 2 sites, or 50%) followed by arboretum sites (2 of 7 sites, or 29%), botanical gardens (3 of 11 sites, or 27%), academic libraries (2 of 10 sites, or 20%), museum libraries (1 of 5 sites or 20%), and institutes/research centers (1 of 7 sites, or 14%). No rare book exhibits were found on society/association library sites.

Of the 8 sites including some form of rare book exhibit, most were very limited. One of the botanical garden libraries, however, linked to 2 separate rare book sites, 1 that included over 200 pages of thumbnail and full-size images of botanical plates. The second linked site was a complete book in digitized form including images of plates, text, and a paragraph of translated text. Another botanical garden library included a page with 12 scanned plates and links to full-page versions of the images with textual description of both the work the illustration came from and the plant depicted in the image. An institute library had several rare book images that linked to full-page versions with bibliographic information and explanatory text. One academic library showcased the title page and 2 plates from an 18th century botanical journal, accompanied by brief explanatory text. Two other libraries, 1 botanical garden and 1 library categorized as academic, herbarium and arboretum included several images with brief textual description and/or bibliographic information. One museum library included an image of an historic seed catalog which was not specifically identified, and 1 arboretum library site devoted exclusively to the rare book collection featured detailed textual descriptions of rare book room exhibits and classes but included no images of the books. The largest libraries (those with collections of 100,000 volumes or more) were most likely to have some form of rare book exhibit (3 of 4 libraries, or 75%).

Twenty-five (68%) of the 37 sites indicated the size of the library collection. For the authority/currency/accuracy section, libraries with collections of less than 5,000 volumes and libraries with collections between 20,000 and 99,999 volumes ranked highest with an average of 67% for all categories. The largest libraries (100,000 or more volumes) ranked highest in the features to promote indexing by search engines section with an average of 88% for all categories.

In terms of navigation/functionality, libraries with collections of between 20,000 and 99,999 volumes ranked highest with an overall average of 86%. This group also had the highest average percentage for organization/format (75%).

For the access for different browsers/systems section, the largest libraries ranked lowest with an average of 42%, while libraries with collections between 20,000 and 99,999 volumes ranked highest with an average of 80%. The smallest libraries with collections less than 5,000 volumes and mid-sized libraries with collections between 5,000 and 19,999 volumes each had an average of 75%.

Libraries reporting the largest collection sizes, however, included more basic library information (73%) than the other libraries. In addition, the smallest libraries, as a group, included the least amount of basic library information. The largest libraries also showed the highest incidence of additional features like online reference (75%), access to databases (75%), and web catalog interface/link (75%).

CHAPTER 5
SUMMARY AND CONCLUSIONS

The results of this study provide an answer to research question no. 1, regarding the types of resources and information included in botanical and horticultural library web sites. Botanical and horticultural libraries vary greatly in terms of size, parent institution and scope, and this is reflected in the wide variety of information and resources included in their web sites.

As to whether these resources are organized and easily accessible, the results of this study (based on the low frequencies in the navigation/functionality and organization/format sections) suggest that for these libraries as a group, the answer is no. It is possible, however, that the criteria selected by the researcher in the evaluation of site organization and format were too limited to provide an accurate representation. A future study might evaluate the nature and use of both graphical and non-graphical headings and lists to provide a more complete picture.

Although over 80% of the libraries in this study provided contact information, collection description and information on hours, only 70% included services and policies information and less than half provided link lists. These results suggest that improvements could be made to these sites in the inclusion of basic library information, especially for botanical garden, society/association, and herbarium library sites, which had the lowest overall average percentages in this section.

Only 38% of the libraries included a new book list or other "what's new" information. This, combined with the lack of frequent updates indicated on these sites and the large number of sites with outdated external links (50%) suggests that the

majority of these libraries are providing little current information to attract users to their web sites.

In terms of basic design features, over 70% of the library sites included links to their parent organization's site, had correct spelling, descriptive <title> tags, identified site author, included <alt> tags for navigational graphics, and demonstrated consistent internal style. The low average frequencies for most of the remaining sections of the evaluation, however, suggest that these libraries, as a group, are not complying with a significant portion of design recommendations.

One area in which the libraries in this study appear to be deficient is in the provision of access for a variety of users. Although the majority of sites indicated the library's primary user groups, none of the sites mentioning multiple user groups included subject guides for the different groups or any other features in the access for different user groups section of the coding form.

This study suggests that botanical and horticultural libraries are only beginning to use the web to exhibit rare book collections. The majority of libraries had no form of rare book exhibit, and most of the libraries that did only included a few images with bibliographic information. Only 2 had full-fledged, multiple-page exhibits. It is important to note, however, that many libraries with botanical rare book collections are general or natural history libraries. These libraries were not part of this study due to subject scope. A future study could focus exclusively on the use of the web to exhibit botanical rare book collections and could evaluate all libraries with such a collection.

This study revealed that libraries with larger collections tend to include more basic library information, more features to promote indexing by search engines, and

have a higher incidence of additional features like rare book exhibits, database and e-journal links, and web catalog interfaces/links. Nevertheless, these sites did not demonstrate higher frequencies of many of the other technical design features.

Academic library sites tended to rate the highest overall, but there was a lot of variation in terms of performance in specific evaluation categories. Academic libraries had the highest average percentages for authority/currency/accuracy (73%), organization/format (68%) and included the most additional features. Museum libraries scored highest for navigation/functionality (78%). Society/Association libraries had the highest average percentage for access for different browsers/systems (75%), and academic and arboretum libraries scored highest as a group for the inclusion of basic library information (66%).

It should be recognized, however, that the categorization of sites into more than 1 library type category may have clouded results. Multiple categorizations were assigned in an effort to accurately represent the types of features and information included in sites of botanical and horticultural libraries originating from different types of parent organizations, but the inclusion of some sites in several categories made a perfect comparison of design features difficult. Future research might evaluate design features based on primary categorization only.

Perhaps the most surprising finding of this study, however, is that so few U.S. botanical and horticultural libraries have fully developed web presences. The large number of single page sites, especially for botanical garden and society/association libraries, illustrates this. In many cases, the library's web page was an integrated part of the larger organization's site. One of the major difficulties of this study was

distinguishing the library site from the parent organization's. In many instances, the library linked to or shared pages with its parent organization's site. This study focused on resources and information included directly on the library's pages, but since many of the sites included image maps or frames linking to major sections of the parent organization's site, in one sense, the library site could be considered to provide access to information in all sections of the parent organization's web site. Evaluation of all information included through parent organization image maps linked to the library page was beyond the scope of this study. Additional research could be done to assess the relationship between the library page and the parent organization site, examining the inclusion of library information and traditional library resources like link lists, database links, and staff information on portions of the organization site not connected with the library page.

This study attempted to collect a large amount of information and provide a broad overview of the content of botanical and horticultural library web sites. It is clear from the small number of web sites available for inclusion in this study that botanical and horticultural libraries are only beginning to utilize the web to provide access to their collections. Future research could include an in-depth analysis of visual design or technical content of botanical and horticultural library web sites, the nature of catalog interfaces, or the role of librarians in site development.

APPENDIX A
DATA COLLECTION INSTRUMENT

BACKGROUND INFORMATION				
date:				
time:				
name of library:				
URL:				
type of library:		academic	institute/research center	other:
		arboretum	museum	
		botanical garden	society/association	
number of pages:				
	collection size indicated:			
	multiple user groups indicated:			
	rare book collection mentioned:			

AUTHORITY/CURRENCY/ACCURACY		
	Category	**Comments/Description**
	author identified	
	email link	
	link to parent organization	
	correct spelling	
	copyright notice	
	external links functioning	
	update indicated	
	· updated in last week	
	· updated in last month	
	· updated in last 6 months	
	· updated in last year	
	· updated over 1 year ago	

FEATURES TO PROMOTE INDEXING BY SEARCH ENGINES		
	Category	**Comments/Description**
	descriptive <title> tags	
	metadata	

BEST COPY AVAILABLE

NAVIGATION/FUNCTIONALITY		
	Category	**Comments/Description**
	navigational links each page	
	links to library home	
	internal links functioning	
	search engine	
	help option	
	guided tour	
	site map	
	index page/TOC	
ORGANIZATION/FORMAT		
	Category	**Comments/Description**
	library name/logo each page	
	use of lists	
	consistent style	
	descriptive <heading> tags	
ACCESS FOR DIFFERENT USER GROUPS		
	Category	**Comments/Description**
	audio for vision impaired	
	subject guides for different user groups	
	multi-language option	
ACCESS FOR DIFFERENT BROWSERS/SYSTEMS		
	Category	**Comments/Description**
	tables	
	navigational graphics	
	frames	
	no-frames option	
	<alt> tags for nav. graphics	
	text-only option	
	functional in Netscape 4.0	
	functional in IE 5.0	
BASIC LIBRARY INFORMATION		
	Category	**Comments/Description**
	collection description	

	mission statement	
	user groups indicated	
	hours	
	staff	
	contact information	
	· address	
	· phone	
	· fax	
	· email	
	email link	
	URL	
	services/policies description	
	link list/ subject guides for internet resources	
	· annotations	
	· description of classification scheme	
ADDITIONAL FEATURES		
	Category	**Comments/Description**
	online rare book exhibit	
	bibliographies/subject guides - print resources	
	online reference	
	library map	
	library image	
	access to e-journals	
	access to databases	
	web catalog interface/link	
	telnet catalog link	
	library newsletter/what's new section/	
	interactive forms	

	printable forms	
	password protected sections	

other:

COMMENTS

APPENDIX B
FREQUENCY TABLES

Table 1. All Libraries

BACKGROUND INFORMATION		
Library Type	**Frequency**	**Percentage**
botanical garden	11	29.73%
academic	10	27.03%
arboretum	7	18.92%
institute/research center	7	18.92%
society/association	5	13.51%
museum	5	13.51%
herbarium	2	5.41%
Page Count: minimum=1 maximum=209 range=208 mean=15.16 mode=1 median=4		
Category	**Frequency**	**Percentage**
collection size indicated	25	67.57%
multiple user groups indicated	23	62.16%
rare book collection	22	59.46%

AUTHORITY/CURRENCY/ACCURACY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
link to parent organization	34	94.44%	1	2.7%
correct spelling	28	75.68%		
author identified	27	72.97%		
email link	19	51.35%		
external links functioning	12	50.00%	13	35.14%
update indicated	18	48.65%		
copyright notice	15	40.54%		
average % Yes for all categories = 61.95%				
· updated in last 6 months	5	13.51%		
· updated in last year	5	13.51%		
· updated over 1 year ago	5	13.51%		
· updated in last month	2	5.41%		
· updated in last week	1	2.70%		

FEATURES TO PROMOTE INDEXING BY SEARCH ENGINES				
Category	**Yes**	**% Yes**	**N/A**	**%N/A**
descriptive <title> tags	31	83.78%		
metadata	17	45.95%		
average % Yes for all categories = 64.87%				

NAVIGATION/FUNCTIONALITY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
navigational links each page *	24	64.86%		
internal links functioning *	24	64.86%	2	5.41%
link to library home each page *	15	60.00%	12	32.43%
index page/ TOC	17	45.95%		
internal search engine	4	10.81%		
site map	1	2.70%		
help option	0	0.00%		
guided tour	0	0.00%		
average % Yes for all * categories = 63.24%				

ORGANIZATION/FORMAT				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
consistent style	28	75.68%		
library name/logo each page	25	67.57%		
use of lists	18	48.65%		
descriptive <heading> tags	17	45.95%		
average % Yes for all categories = 59.46%				
ACCESS FOR DIFFERENT USER GROUPS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
audio for vision impaired	0	0.00%		
multi language option	0	0.00%		
subject guides for different user groups	0	0.00%	14	37.84%
average % Yes for all categories = 0.00%				
ACCESS FOR DIFFERENT BROWSERS/SYSTEMS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
functional in Internet Explorer *	37	100.00%		
functional in Netscape *	35	94.59%		
tables	29	78.38%		
<alt> tags for navigational graphics *	20	74.07%	10	27.03%
navigational graphics	27	72.97%		
no-frames option *	1	25.00%	33	89.19%
frames	4	10.81%		
text-only option *	1	2.70%		
average % Yes for all * categories = 59.27%				
BASIC LIBRARY INFORMATION				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
contact info *	34	91.89%		
· phone	31	83.78%		
· address	28	75.68%		
· email	27	72.97%		
· fax	16	43.24%		
collection description *	33	89.19%		
hours *	31	83.78%		
email link *	26	70.27%		
services and policies *	26	70.27%		
user groups indicated *	25	67.57%		
staff *	20	54.05%		
link list/SG for internet resources *	15	40.54%		
· annotations for internet resources	8	53.33%	22	59.46%
· IR classification explained	0	0.00%	22	59.46%
URL *	7	18.92%		
mission statement *	6	16.22%		
average % Yes for all * categories = 60.27%				
Services and Policies				
· circulation	20	54.05%		
· reference	12	32.43%		
· photocopies	12	32.43%		
· interlibrary loan	9	24.32%		
· access to collection	8	21.62%		
· fees/fines	4	10.81%		
· donations	3	8.11%		
· bibliographic instruction	3	8.11%		
· library tours	2	5.41%		
· available A-V equipment	2	5.41%		
· food & drink policies	2	5.41%		

· appointments	1	2.70%		
· available local databases	1	2.70%		
· bibliographies	1	2.70%		
· book purchasing/cataloging	1	2.70%		
· book talks	1	2.70%		
· books-by-mail	1	2.70%		
· browsing	1	2.70%		
· career planning	1	2.70%		
· CD-ROM access	1	2.70%		
· citation verification	1	2.70%		
· current awareness/TOC Service	1	2.70%		
· document delivery	1	2.70%		
· downloading	1	2.70%		
· electronic library workstations	1	2.70%		
· email book renewal/holds	1	2.70%		
· email notification of new materials	1	2.70%		
· email reference	1	2.70%		
· emailing	1	2.70%		
· library programs	1	2.70%		
· online search instruction	1	2.70%		
· online searching	1	2.70%		
· printing	1	2.70%		
· rare book exhibit/class info	1	2.70%		
· reading/study area	1	2.70%		
· research assistance	1	2.70%		
· story hour	1	2.70%		
· upcoming art exhibits	1	2.70%		
· volunteering	1	2.70%		
ADDITIONAL FEATURES				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
other	28	75.68%		
access to databases	16	43.24%		
web catalog interface/link	16	43.24%		
library image	15	40.54%		
access to e-journals	12	32.43%		
online reference	9	24.32%		
other what's new	8	21.62%		
online rare book exhibit	8	21.62%		
new book list	6	16.22%		
subject guides for print resources	5	13.51%		
telnet catalog link	4	10.81%		
interactive forms	4	10.81%		
printable forms	2	5.41%		
library map	0	0.00%		
library newsletter	0	0.00%		
password protected section	0	0.00%		
Other				
· history	9	24.32%		
· directions or map to library	9	24.32%		
· archives information	6	16.22%		
· friends of library info	3	8.11%		
· accessibility info for disabled	3	8.11%		
· list of library publications	3	8.11%		
· online archival finding aids	3	8.11%		
· staff photos	2	5.41%		
· duplicate book/journal lists	2	5.41%		

· journal holdings list	2	5.41%
· link to internet search engines	2	5.41%
· online catalog search tips	2	5.41%
· staff bios	1	2.70%
· list of faculty publications	1	2.70%
· library advisory committee info	1	2.70%
· partnerships w/ other libraries	1	2.70%
· online index for honors papers	1	2.70%
· book sale info	1	2.70%
· library donors list	1	2.70%
· FAQ	1	2.70%
· internet tutorials	1	2.70%
· favorite reference Q&A	1	2.70%
· website credits	1	2.70%
· info database maintenance	1	2.70%
· info on card and online catalog	1	2.70%
· info on classification scheme	1	2.70%
· journal exchange info	1	2.70%
· volunteer list	1	2.70%
· info on library endowment fund	1	2.70%
· purchase recommendation info	1	2.70%
Other What's New		
· link to parent org news/what's new	5	13.51%
· info on closing/construction	2	5.41%
· new catalog entries	1	2.70%
Printable Forms		
· publications order form	1	2.70%
· reserves	1	2.70%
Interactive Forms		
· reference	3	8.11%
· materials request	1	2.70%
· email	1	2.70%

Table 2. Academic Libraries

BACKGROUND INFORMATION				
Total Libraries: 10				
Page Count: minimum=1 maximum=209 range=208 mean=30.30 mode=2 median=6				
Category		**Frequency**		**Percentage**
multiple user groups indicated		7		70.00%
collection size indicated		6		60.00%
rare book collection		3		30.00%
AUTHORITY/CURRENCY/ACCURACY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
link to parent organization	10	100.00%		
author identified	9	90.00%		
correct spelling	8	80.00%		
update indicated	8	80.00%		
email link	6	60.00%		
copyright notice	5	50.00%		
external links functioning	5	50.00%		
average % Yes for all categories = 72.86%				
· updated in last 6 months	4	40.00%		
· updated in last year	2	20.00%		
· updated in last month	1	10.00%		
· updated over 1 year ago	1	10.00%		
· updated in last week	0	0.00%		
FEATURES TO PROMOTE INDEXING BY SEARCH ENGINES				
Category	**Yes**	**% Yes**	**N/A**	**%N/A**
descriptive <title> tags	10	100.00%		
metadata	2	20.00%		
average % Yes for all categories = 60.00%				
NAVIGATION/FUNCTIONALITY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
index page/ TOC	8	80.00%		
navigational links each page *	7	70.00%		
link to library home each page *	6	66.67%	1	10.00%
internal links functioning *	6	60.00%		
internal search engine	1	10.00%		
help option	0	0.00%		
guided tour	0	0.00%		
site map	0	0.00%		
average % Yes for all * categories = 65.56%				
ORGANIZATION/FORMAT				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
library name/logo each page	8	80.00%		
use of lists	7	70.00%		
consistent style	6	60.00%		
descriptive <heading> tags	6	60.00%		
average % Yes for all categories = 67.50%				

ACCESS FOR DIFFERENT USER GROUPS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
audio for vision impaired	0	0.00%		
multi language option	0	0.00%		
subject guides for different user groups	0	0.00%	3	30.00%
average % Yes for all categories = 0.00%				
ACCESS FOR DIFFERENT BROWSERS/SYSTEMS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
functional in Internet Explorer *	10	100.00%		
tables	9	90.00%		
navigational graphics	9	90.00%		
<alt> tags for navigational graphics *	8	88.89%	1	10.00%
functional in Netscape *	8	80.00%		
no-frames option *	1	50.00%	8	80.00%
frames	2	20.00%		
text-only option *	0	0.00%		
average % Yes for all * categories = 63.78%				
BASIC LIBRARY INFORMATION				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
collection description *	9	90.00%		
contact info *	9	90.00%		
· address	9	90.00%		
· phone	9	90.00%		
· email	7	70.00%		
· fax	6	60.00%		
hours *	8	80.00%		
services and policies *	8	80.00%		
user groups indicated *	7	70.00%		
staff *	7	70.00%		
email link *	7	70.00%		
link list/SG for internet resources *	6	60.00%		
· annotations for internet resources	3	50.00%	4	40.00%
· IR classification explained	0	0.00%	4	40.00%
URL *	4	40.00%		
mission statement *	1	10.00%		
average % Yes for all * categories = 66.00%				
Services & Policies				
· circulation	8	80.00%		
· access to collection	3	30.00%		
· photocopies	3	30.00%		
· bibliographic instruction	2	20.00%		
· food & drink policies	2	20.00%		
· interlibrary loan	2	20.00%		
· reference	2	20.00%		
· appointments	1	10.00%		
· available A-V equipment	1	10.00%		
· current awareness/TOC Service	1	10.00%		

· document delivery	1	10.00%		
· downloading	1	10.00%		
· electronic library workstations	1	10.00%		
· email book renewal/holds	1	10.00%		
· emailing	1	10.00%		
· fees/fines	1	10.00%		
· printing	1	10.00%		
· reading/study area	1	10.00%		
ADDITIONAL FEATURES				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
access to databases	9	90.00%		
web catalog interface/link	8	80.00%		
other	8	80.00%		
access to e-journals	7	70.00%		
library image	3	30.00%		
online reference	3	30.00%		
telnet catalog link	3	30.00%		
other what's new	3	30.00%		
online rare book exhibit	2	20.00%		
printable forms	2	20.00%		
subject guides for print resources	1	10.00%		
new book list	1	10.00%		
library map	0	0.00%		
library newsletter	0	0.00%		
interactive forms	0	0.00%		
password protected section	0	0.00%		
Other				
· directions or map to library	4	40.00%		
· history	2	20.00%		
· friends of library info	2	20.00%		
· archives information	2	20.00%		
· online archival finding aids	2	20.00%		
· duplicate book/journal lists	1	10.00%		
· accessibility info for disabled	1	10.00%		
· list of library publications	1	10.00%		
· list of faculty publications	1	10.00%		
· online index for honors papers	1	10.00%		
· info on library endowment fund	1	10.00%		
· purchase recommendation info	1	10.00%		
· online catalog search tips	1	10.00%		
Other What's New				
· link to parent org news/what's new	1	10.00%		
· info on closing/construction	1	10.00%		
· new catalog entries	1	10.00%		
Printable Forms				
· publications order form	1	10.00%		
· reserves	1	10.00%		

Table 3. Arboretum Libraries

BACKGROUND INFORMATION				
Total Libraries: 7				
Page Count: minimum=1 maximum=209 range=208 mean=42.43 mode=n/a median=11				
Category		**Frequency**	**Percentage**	
collection size indicated		6	85.71%	
rare book collection		6	85.71%	
multiple user groups indicated		4	57.14%	
AUTHORITY/CURRENCY/ACCURACY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
link to parent organization	7	100.00%		
author identified	5	71.43%		
correct spelling	5	71.43%		
external links functioning	3	50.00%	1	14.29%
email link	3	42.86%		
update indicated	3	42.86%		
copyright notice	2	28.57%		
average % Yes for all categories = 58.16%				
· updated in last month	2	28.57%		
· updated in last year	1	14.29%		
· updated in last week	0	0.00%		
· updated in last 6 months	0	0.00%		
· updated over 1 year ago	0	0.00%		
FEATURES TO PROMOTE INDEXING BY SEARCH ENGINES				
Category	**Yes**	**% Yes**	**N/A**	**%N/A**
descriptive <title> tags	7	100.00%		
metadata	3	42.86%		
average % Yes for all categories = 71.43%				
NAVIGATION/FUNCTIONALITY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
navigational links each page *	5	71.43%		
link to library home each page *	4	66.67%	1	14.29%
internal links functioning *	4	57.14%		
index page/ TOC	4	57.14%		
internal search engine	0	0.00%		
help option	0	0.00%		
guided tour	0	0.00%		
site map	0	0.00%		
average % Yes for all * categories = 65.08%				
ORGANIZATION/FORMAT				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
use of lists	5	71.43%		
library name/logo each page	4	57.14%		
consistent style	3	42.86%		
descriptive <heading> tags	3	42.86%		
average % Yes for all categories = 53.57%				
ACCESS FOR DIFFERENT USER GROUPS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
audio for vision impaired	0	0.00%		
multi language option	0	0.00%		
subject guides for different user groups	0	0.00%	3	42.86%%

average % Yes for all categories = 0.00%				
ACCESS FOR DIFFERENT BROWSERS/SYSTEMS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
<alt> tags for navigational graphics*	6	100.00%	1	14.29%
functional in Internet Explorer*	7	100.00%		
navigational graphics	6	85.71%		
functional in Netscape*	6	85.71%		
tables	4	57.14%		
no-frames option*	1	50.00%	5	71.43%
frames	2	28.57%		
text-only option*	0	0.00%		
average % Yes for all * categories = 67.14%				
BASIC LIBRARY INFORMATION				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
collection description *	7	100.00%		
hours *	7	100.00%		
contact info *	7	100.00%		
· phone	6	85.71%		
· email	6	85.71%		
· address	5	71.43%		
· fax	4	57.14%		
services and policies *	7	100.00%		
email link *	6	85.71%		
user groups indicated *	5	71.43%		
staff *	4	57.14%		
link list/SG for internet resources *	2	28.57%		
· annotations for internet resources	2	28.57%	5	71.43%
· IR classification explained	0	0.00%	5	71.43%
URL *	1	14.29%		
mission statement *	0	0.00%		
average % Yes for all * categories = 65.71%				
Services & Policies				
· circulation	6	85.71%		
· photocopies	3	42.86%		
· access to collection	2	28.57%		
· reference	2	28.57%		
· story hour	1	14.29%		
· appointments	1	14.29%		
· available A-V equipment	1	14.29%		
· bibliographies	1	14.29%		
· donations	1	14.29%		
· email reference	1	14.29%		
· fees/fines	1	14.29%		
· food & drink policies	1	14.29%		
· interlibrary loan	1	14.29%		
· rare book exhibit/class info	1	14.29%		
· upcoming art exhibits	1	14.29%		
· volunteering	1	14.29%		
ADDITIONAL FEATURES				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
other	5	71.43%		
access to databases	4	57.14%		
library image	3	42.86%		
web catalog interface/link	3	42.86%		
online reference	2	28.57%		

access to e-journals	2	28.57%
online rare book exhibit	2	28.57%
subject guides for print resources	1	14.29%
telnet catalog link	1	14.29%
other what's new	1	14.29%
printable forms	1	14.29%
library map	0	0.00%
library newsletter	0	0.00%
new book list	0	0.00%
interactive forms	0	0.00%
password protected section	0	0.00%
Other		
· history	4	57.14%
· directions or map to library	2	28.57%
· friends of library info	2	28.57%
· archives information	2	28.57%
· online archival finding aids	2	28.57%
· staff photos	1	14.29%
· list of library publications	1	14.29%
· online catalog search tips	1	14.29%
Other What's New		
· info on closing/construction	1	14.29%
Printable Forms		
· publications order form	1	14.29%

Table 4. Botanical Garden Libraries

BACKGROUND INFORMATION				
Total Libraries: 11				
Page Count: minimum=1 maximum=16 range=15 mean=5 mode=1 median=1				
Category		**Frequency**		**Percentage**
collection size indicated		9		81.82%
rare book collection		8		72.73%
multiple user groups indicated		5		45.45%
AUTHORITY/CURRENCY/ACCURACY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
link to parent organization	10	90.91%		
author identified	8	72.73%		
correct spelling	8	72.73%		
copyright notice	7	63.64%		
email link	6	54.55%		
update indicated	3	27.27%		
external links functioning	1	20.00%	6	54.55%
average % Yes for all categories = 57.40%				
· updated in last year	2	18.18%		
· updated over 1 year ago	1	9.09%		
· updated in last week	0	0.00%		
· updated in last month	0	0.00%		
· updated in last 6 months	0	0.00%		
FEATURES TO PROMOTE INDEXING BY SEARCH ENGINES				
Category	**Yes**	**% Yes**	**N/A**	**%N/A**
descriptive <title> tags	8	72.73%		
metadata	5	45.45%		
average % Yes for all categories = 59.09%				
NAVIGATION/FUNCTIONALITY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
internal links functioning *	7	70.00%	1	9.09%
link to library home each page *	3	60.00%	6	54.55%
navigational links each page *	6	54.55%		
index page/ TOC	5	45.45%		
internal search engine	3	27.27%		
help option	0	0.00%		
guided tour	0	0.00%		
site map	0	0.00%		
average % Yes for all * categories = 61.52%				
ORGANIZATION/FORMAT				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
consistent style	9	81.82%		
library name/logo each page	7	63.64%		
descriptive <heading> tags	4	36.36%		
use of lists	2	18.18%		
average % Yes for all categories =50.00%				
ACCESS FOR DIFFERENT USER GROUPS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
audio for vision impaired	0	0.00%		
multi language option	0	0.00%		
subject guides for different user groups	0	0.00%	6	54.55%

average % Yes for all categories =0.00%

ACCESS FOR DIFFERENT BROWSERS/SYSTEMS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
functional in Internet Explorer*	11	100.00%		
tables	10	90.91%		
functional in Netscape*	10	90.91%		
navigational graphics	7	63.64%		
<alt> tags for navigational graphics*	4	57.14%	4	36.36%
frames	0	0.00%		
text-only option*	0	0.00%		
no-frames option	0	---------	11	100.00%
average % Yes for all * categories = 62.01%				

BASIC LIBRARY INFORMATION				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
collection description *	10	90.91%		
contact info *	10	90.91%		
· phone	10	90.91%		
· address	8	72.73%		
· email	6	54.55%		
· fax	3	27.27%		
hours *	9	81.82%		
user groups indicated *	6	54.55%		
staff *	6	54.55%		
email link *	6	54.55%		
services and policies *	5	45.45%		
link list/SG for internet resources *	4	36.36%		
· annotations for internet resources	1	25.00%	7	63.64%
· IR classification explained	0	0.00%	7	63.64%
URL *	1	9.09%		
mission statement *	0	0.00%		
average % Yes for all * categories = 51.82 %				
Services & Policies				
· circulation	4	36.36%		
· photocopies	4	36.36%		
· interlibrary loan	3	27.27%		
· access to collection	2	18.18%		
· reference	2	18.18%		
· available A-V equipment	1	9.09%		
· available local databases	1	9.09%		
· bibliographies	1	9.09%		
· CD-ROM access	1	9.09%		
· donations	1	9.09%		
· fees/fines	1	9.09%		
· online searching	1	9.09%		
· story hour	1	9.09%		
· upcoming art exhibits	1	9.09%		
· volunteering	1	9.09%		

ADDITIONAL FEATURES				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
other	8	72.73%		
library image	5	45.45%		
access to databases	4	36.36%		
web catalog interface/link	3	27.27%		
online rare book exhibit	3	27.27%		
online reference	2	18.18%		

subject guides for print resources	1	9.09%
access to e-journals	1	9.09%
telnet catalog link	1	9.09%
other what's new	1	9.09%
library map	0	0.00%
library newsletter	0	0.00%
new book list	0	0.00%
printable forms	0	0.00%
interactive forms	0	0.00%
password protected section	0	0.00%
Other		
· history	4	36.36%
· archives information	3	27.27%
· online archival finding aids	1	9.09%
· directions or map to library	1	9.09%
· staff photos	1	9.09%
· duplicate book/journal lists	1	9.09%
· list of library publications	1	9.09%
· book sale info	1	9.09%
· library donors list	1	9.09%
· info on card and online catalog	1	9.09%
· info on classification scheme	1	9.09%
· journal exchange info	1	9.09%
· volunteer list	1	9.09%
· online catalog search tips	1	9.09%
Other What's New		
· link to parent org news/what's new	1	9.09%

Table 5. Herbarium Libraries

BACKGROUND INFORMATION		
Total Libraries: 2		
Page Count: minimum=1 maximum=209 range=208 mean=105 mode=n/a median=104		
Category	**Frequency**	**Percentage**
collection size indicated	1	50.00%
multiple user groups indicated	1	50.00%
rare book collection	1	50.00%

AUTHORITY/CURRENCY/ACCURACY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
author identified	2	100.00%		
link to parent organization	2	100.00%		
email link	1	50.00%		
correct spelling	1	50.00%		
copyright notice	1	50.00%		
update indicated	1	50.00%		
external links functioning	0	0.00%		
average % Yes for all categories = 57.14%				
· updated in last 6 months	1	50.00%		
· updated in last week	0	0.00%		
· updated in last month	0	0.00%		
· updated in last year	0	0.00%		
· updated over 1 year ago	0	0.00%		

FEATURES TO PROMOTE INDEXING BY SEARCH ENGINES				
Category	**Yes**	**% Yes**	**N/A**	**%N/A**
descriptive <title> tags	2	100.00%	0	0.00%
metadata	0	0.00%	0	0.00%
average % Yes for all categories = 50%				

NAVIGATION/FUNCTIONALITY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
navigational links each page *	1	50.00%		
internal links functioning *	1	50.00%		
index page/ TOC	1	50.00%		
link to library home each page *	0	0.00%	1	50.00%
internal search engine	0	0.00%		
help option	0	0.00%		
guided tour	0	0.00%		
site map	0	0.00%		
average % Yes for all * categories = 33.33%				

ORGANIZATION/FORMAT				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
use of lists	2	100.00%		
library name/logo each page	1	50.00%		
consistent style	1	50.00%		
descriptive <heading> tags	1	50.00%		
average % Yes for all categories = 62.50%				

ACCESS FOR DIFFERENT USER GROUPS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
audio for vision impaired	0	0.00%		
multi language option	0	0.00%		
subject guides for different user groups	0	0.00%	1	50.00%
average % Yes for all categories = 0.00%				
ACCESS FOR DIFFERENT BROWSERS/SYSTEMS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
navigational graphics	2	100.00%		
<alt> tags for navigational graphics *	2	100.00%		
functional in Internet Explorer *	2	100.00%		
tables	1	50.00%		
frames	1	50.00%		
functional in Netscape *	1	50.00%		
no-frames option *	0	0.00%	1	50.00%
text-only option *	0	0.00%		
average % Yes for all * categories = 50.00%				
BASIC LIBRARY INFORMATION				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
collection description *	2	100.00%		
services and policies *	2	100.00%		
user groups indicated *	1	50.00%		
hours *	1	50.00%		
contact info *	1	50.00%		
· address	1	50.00%		
· phone	1	50.00%		
· fax	1	50.00%		
· email	1	50.00%		
email link *	1	50.00%		
link list/SG for internet resources *	1	50.00%		
· annotations for internet resources	1	100.00%	1	50.00%
· IR classification explained	0	0.00%	1	50.00%
mission statement *	0	0.00%		
staff *	0	0.00%		
URL *	0	0.00%		
average % Yes for all * categories = 45.00%				
Services & Policies				
· circulation	2	100.00%		
· access to collection	1	50.00%		
· appointments	1	50.00%		
· food & drink policies	1	50.00%		
ADDITIONAL FEATURES				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
access to databases	2	100.00%		
web catalog interface/link	2	100.00%		
other	2	100.00%		

online reference	1	50.00%
access to e-journals	1	50.00%
other what's new	1	50.00%
online rare book exhibit	1	50.00%
library map	0	0.00%
library image	0	0.00%
subject guides for print resources	0	0.00%
telnet catalog link	0	0.00%
library newsletter	0	0.00%
new book list	0	0.00%
printable forms	0	0.00%
interactive forms	0	0.00%
password protected section	0	0.00%
Other		
· history	1	50.00%
· friends of library info	1	50.00%
· archives information	1	50.00%
· online archival finding aids	1	50.00%
· online catalog search tips	1	50.00%
Other What's New		
· link to new catalog entries	1	50.00%

Table 6. Institute/Research Center Libraries

BACKGROUND INFORMATION				
Total Libraries: 7				
Page Count: minimum=2 maximum=81 range=80 mean=16.43 mode=n/a median=7				
Category		**Frequency**	**Percentage**	
multiple user groups indicated		5	71.43%	
collection size indicated		4	57.14%	
rare book collection		4	57.14%	
AUTHORITY/CURRENCY/ACCURACY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
link to parent organization	7	100.00%		
author identified	6	85.71%		
correct spelling	5	71.43%		
email link	4	57.14%		
update indicated	4	57.14%		
external links functioning	2	40.00%	2	28.57%
copyright notice	2	28.57%		
average % Yes for all categories = 62.86%				
· updated in last year	2	28.57%		
· updated in last 6 months	1	14.29%		
· updated over 1 year ago	1	14.29%		
· updated in last week	0	0.00%		
· updated in last month	0	0.00%		
FEATURES TO PROMOTE INDEXING BY SEARCH ENGINES				
Category	**Yes**	**% Yes**	**N/A**	**%N/A**
descriptive <title> tags	6	85.71%		
metadata	3	42.86%		
average % Yes for all categories = 64.29%				
NAVIGATION/FUNCTIONALITY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
internal links functioning *	5	71.43%		
navigational links each page *	4	57.14%		
link to library home each page *	4	57.14%		
index page/ TOC	3	42.86%		
site map	1	14.29%		
internal search engine	0	0.00%		
help option	0	0.00%		
guided tour	0	0.00%		
average % Yes for all * categories = 61.90%				
ORGANIZATION/FORMAT				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
use of lists	6	85.71%		
consistent style	5	71.43%		
descriptive <heading> tags	4	57.14%		
library name/logo each page	3	42.86%		
average % Yes for all categories = 64.29%				
ACCESS FOR DIFFERENT USER GROUPS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
audio for vision impaired	0	0.00%		

multi language option	0	0.00%		
subject guides for different user groups	0	0.00%	2	28.57%
average % Yes for all categories = 0.00%				
ACCESS FOR DIFFERENT BROWSERS/SYSTEMS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
functional in Netscape *	7	100.00%		
functional in Internet Explorer *	7	100.00%		
navigational graphics	5	71.43%		
tables	4	57.14%		
<alt> tags for navigational graphics *	2	40.00%	2	28.57%
frames	2	28.57%		
text-only option *	1	14.29%		
no-frames option *	0	0.00%	5	71.43%
average % Yes for all * categories = 50.86%				
BASIC LIBRARY INFORMATION				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
contact info *	7	100.00%		
· email	7	100.00%		
· address	5	71.43%		
· phone	5	71.43%		
· fax	2	28.57%		
email link *	6	85.71%		
collection description *	5	71.43%		
user groups indicated *	5	71.43%		
hours *	5	71.43%		
link list/SG for internet resources *	4	57.14%		
· annotations for IR	4	100.00%	3	42.86%
· IR classification explained	0	0.00%	3	42.86%
services and policies *	4	57.14%		
staff *	3	42.86%		
mission statement *	2	28.57%		
URL *	1	14.29%		
average % Yes for all * categories = 60.00%				
Services & Policies				
· reference	3	42.86%		
· circulation	2	28.57%		
· interlibrary loan	2	28.57%		
· photocopies	2	28.57%		
· access to collection	2	28.57%		
· bibliographic instruction	1	14.29%		
· book purchasing/cataloging	1	14.29%		
· book talks	1	14.29%		
· citation verification	1	14.29%		
· email notification of new materials	1	14.29%		
· library tours	1	14.29%		
· online search instruction	1	14.29%		
· research assistance	1	14.29%		

· fees/fines	1	14.29%		
ADDITIONAL FEATURES				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
other	6	85.71%		
access to e-journals	4	57.14%		
library image	4	57.14%		
access to databases	3	42.86%		
online reference	2	28.57%		
interactive forms	2	28.57%		
web catalog interface/link	2	28.57%		
new book list	2	28.57%		
subject guides for print resources	1	14.29%		
other what's new	1	14.29%		
online rare book exhibit	1	14.29%		
library map	0	0.00%		
telnet catalog link	0	0.00%		
library newsletter	0	0.00%		
printable forms	0	0.00%		
password protected section	0	0.00%		
Other				
· directions or map to library	2	28.57%		
· accessibility info for disabled	2	28.57%		
· journal holdings list	2	28.57%		
· link to internet search engines	2	28.57%		
· staff photos	1	14.29%		
· staff bios	1	14.29%		
· FAQ	1	14.29%		
· internet tutorials	1	14.29%		
· favorite reference Q&A	1	14.29%		
· website credits	1	14.29%		
· info on database maintenance	1	14.29%		
Other What's New				
· link to parent org news/what's new	1	14.29%		
Interactive Forms				
· reference	2	28.57%		

Table 7. Museum Libraries

BACKGROUND INFORMATION				
Total Libraries: 5				
Page Count: minimum=1 maximum=30 range=29 mean=10.4 mode=n/a median=8				
Category		**Frequency**	**Percentage**	
rare book collection		3	60.00%	
multiple user groups indicated		2	40.00%	
collection size indicated		1	20.00%	
AUTHORITY/CURRENCY/ACCURACY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
link to parent organization	4	100.00%	1	20.00%
external links functioning	3	100.00%	2	40.00%
correct spelling	4	80.00%		
author identified	3	60.00%		
email link	3	60.00%		
update indicated	3	60.00%		
copyright notice	0	0.00%		
average % Yes for all categories = 65.71%				
· updated in last year	2	40.00%		
· updated in last week	1	20.00%		
· updated in last 6 months	0	0.00%		
· updated in last month	0	0.00%		
· updated over 1 year ago	0	0.00%		
FEATURES TO PROMOTE INDEXING BY SEARCH ENGINES				
Category	**Yes**	**% Yes**	**N/A**	**%N/A**
descriptive <title> tags	3	60.00%		
metadata	3	60.00%		
average % Yes for all categories = 60.00%				
NAVIGATION/FUNCTIONALITY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
internal links functioning *	4	80.00%		
navigational links each page *	4	80.00%		
link to library home each page *	3	75.00%	1	20.00%
index page/ TOC	3	60.00%		
internal search engine	0	0.00%		
help option	0	0.00%		
guided tour	0	0.00%		
site map	0	0.00%		
average % Yes for all * categories = 78.33%				
ORGANIZATION/FORMAT				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
consistent style	4	80.00%		
descriptive <heading> tags	4	80.00%		
library name/logo each page	2	40.00%		
use of lists	2	40.00%		
average % Yes for all categories = 60.00%				

ACCESS FOR DIFFERENT USER GROUPS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
audio for vision impaired	0	0.00%		
multi language option	0	0.00%		
subject guides for different user groups	0	0.00%	3	60.00%
average % Yes for all categories = 0.00%				
ACCESS FOR DIFFERENT BROWSERS/SYSTEMS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
navigational graphics	5	100.00%		
functional in Netscape *	5	100.00%		
functional in Internet Explorer *	5	100.00%		
<alt> tags for navigational graphics *	2	40.00%		
tables	2	40.00%		
frames	2	40.00%		
text-only option *	0	0.00%		
no-frames option *	0	0.00%	3	60.00%
average % Yes for all * categories = 48.00%				
BASIC LIBRARY INFORMATION				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
contact info *	5	100.00%		
· email	5	100.00%		
· address	4	80.00%		
· phone	3	60.00%		
· fax	2	40.00%		
email link *	4	80.00%		
collection description *	3	60.00%		
services and policies *	3	60.00%		
hours *	3	60.00%		
link list/SG for internet resources *	3	60.00%		
· annotations for internet resources	2	66.67%	2	40.00%
· IR classification explained	0	0.00%	2	40.00%
mission statement *	2	40.00%		
user groups indicated *	2	40.00%		
staff *	2	40.00%		
URL *	1	20.00%		
average % Yes for all * categories = 56.00%				
Services & Policies				
· access to collection	2	40.00%		
· donations	2	40.00%		
· interlibrary loan	1	20.00%		
· library programs	1	20.00%		
· library tours	1	20.00%		
· photocopies	1	20.00%		
ADDITIONAL FEATURES				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
other	3	60.00%		
web catalog interface/link	2	40.00%		

library image	2	40.00%
access to databases	2	40.00%
online reference	2	40.00%
access to e-journals	2	40.00%
interactive forms	2	40.00%
other what's new	1	20.00%
new book list	1	20.00%
online rare book exhibit	1	20.00%
library map	0	0.00%
subject guides for print resources	0	0.00%
telnet catalog link	0	0.00%
library newsletter	0	0.00%
printable forms	0	0.00%
password protected section	0	0.00%
Other		
· link to internet search engines	2	40.00%
· accessibility info for disabled	2	40.00%
· history	1	20.00%
· friends of library info	1	20.00%
· partnerships w/ other libraries	1	20.00%
· archives information	1	20.00%
Other What's New		
· link to parent org news/what's new	1	20.00%
Interactive Forms		
· reference	2	40.00%

Table 8. Society/ Association Libraries

BACKGROUND INFORMATION				
Total Libraries: 5				
Page Count: minimum=1 maximum=13 range=12 mean=3.4 mode=1 median=1				
Category		**Frequency**		**Percentage**
collection size indicated		4		80.00%
multiple user groups indicated		4		80.00%
rare book collection		2		40.00%
AUTHORITY/CURRENCY/ACCURACY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
correct spelling	5	100.00%		
external links functioning	2	100.00%	3	60.00%
link to parent organization	4	80.00%		
author identified	3	60.00%		
email link	2	40.00%		
copyright notice	2	40.00%		
update indicated	2	40.00%		
average % Yes for all categories = 65.71%				
· updated over 1 year ago	2	40.00%		
· updated in last week	0	0.00%		
· updated in last month	0	0.00%		
· updated in last 6 months	0	0.00%		
· updated in last year	0	0.00%		
FEATURES TO PROMOTE INDEXING BY SEARCH ENGINES				
Category	**Yes**	**% Yes**	**N/A**	**%N/A**
descriptive <title> tags	4	80.00%		
metadata	3	60.00%		
average % Yes for all categories = 70.00%				
NAVIGATION/FUNCTIONALITY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
navigational links each page *	3	60.00%		
internal links functioning *	2	50.00%	1	20.00%
index page/ TOC	1	20.00%		
link to library home each page *	0	0.00%	3	60.00%
internal search engine	0	0.00%		
help option	0	0.00%		
guided tour	0	0.00%		
site map	0	0.00%		
average % Yes for all * categories = 36.67%				
ORGANIZATION/FORMAT				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
consistent style	5	100.00%		
library name/logo each page	4	80.00%		
use of lists	2	40.00%		
descriptive <heading> tags	1	20.00%		
average % Yes for all categories = 60.00%				

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ACCESS FOR DIFFERENT USER GROUPS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
audio for vision impaired	0	0.00%		
multi language option	0	0.00%		
subject guides for different user groups	0	0.00%	1	20.00%
average % Yes for all categories = 0.00%				
ACCESS FOR DIFFERENT BROWSERS/SYSTEMS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
tables	5	100.00%		
<alt> tags for navigational graphics *	3	100.00%	2	40.00%
functional in Netscape *	5	100.00%		
functional in Internet Explorer *	5	100.00%		
navigational graphics	3	60.00%		
frames	0	0.00%		
text-only option *	0	0.00%		
no-frames option	0	--------	5	100.00%
average % Yes for all * categories = 75.00 %				
BASIC LIBRARY INFORMATION				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
collection description *	4	80.00%		
user groups indicated *	4	80.00%		
hours *	4	80.00%		
contact info *	4	80.00%		
· address	4	80.00%		
· phone	4	80.00%		
· email	3	60.00%		
· fax	2	40.00%		
services and policies *	4	80.00%		
email link *	3	60.00%		
staff *	2	40.00%		
mission statement *	1	20.00%		
link list/SG for internet resources *	1	20.00%		
· annotations for internet resources	0	0.00%	4	80.00%
· IR classification explained	0	0.00%	4	80.00%
URL *	0	0.00%		
average % Yes for all * categories = 54.00%				
Services & Policies				
· circulation	4	80.00%		
· reference	3	60.00%		
· photocopies	1	20.00%		
· books-by-mail	1	20.00%		
· browsing	1	20.00%		
· career planning	1	20.00%		
ADDITIONAL FEATURES				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
other	4	80.00%		
new book list	3	60.00%		

web catalog interface/link	2	40.00%
interactive forms	2	40.00%
library image	1	20.00%
subject guides for print resources	1	20.00%
online reference	1	20.00%
access to e-journals	1	20.00%
access to databases	1	20.00%
other what's new	1	20.00%
library map	0	0.00%
telnet catalog link	0	0.00%
library newsletter	0	0.00%
online rare book exhibit	0	0.00%
printable forms	0	0.00%
password protected section	0	0.00%
Other		
· directions or map to library	2	40.00%
· history	1	20.00%
· list of library publications	1	20.00%
· library advisory committee info	1	20.00%
Other What's New		
· link to parent org news/what's new	1	20.00%
Interactive Forms		
· email	1	20.00%
· materials request	1	20.00%
· reference	1	20.00%

Table 9. Collections < 5,000 Volumes

BACKGROUND INFORMATION				
Library Type			**Frequency**	**Percentage**
botanical garden			2	40.00%
arboretum			1	20.00%
institute/research center			1	20.00%
society/association			1	20.00%
academic			0	0.00%
herbarium			0	0.00%
museum			0	0.00%
Total Libraries: 5				
Page Count: minimum=1 maximum=38 range=37 mean=8.6 mode=1 median=1				
AUTHORITY/CURRENCY/ACCURACY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
author identified	5	100.00%		
email link	4	80.00%		
link to parent organization	4	80.00%		
copyright notice	4	80.00%		
external links functioning	1	50.00%	3	60.00%
correct spelling	2	40.00%		
update indicated	2	40.00%		
average % Yes for all categories = 67.14%				
· updated over 1 year ago	2	40.00%		
· updated in last week	0	0.00%		
· updated in last month	0	0.00%		
· updated in last 6 months	0	0.00%		
· updated in last year	0	0.00%		
FEATURES TO PROMOTE INDEXING BY SEARCH ENGINES				
Category	**Yes**	**% Yes**	**N/A**	**%N/A**
descriptive <title> tags	5	100.00%		
metadata	1	20.00%		
average % Yes for all categories = 60.00%				
NAVIGATION/FUNCTIONALITY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
link to library home each page *	1	50.00%	3	60.00%
internal links functioning *	1	25.00%	1	20.00%
navigational links each page *	1	20.00%		
internal search engine	0	0.00%		
help option	0	0.00%		
guided tour	0	0.00%		
site map	0	0.00%		
index page/ TOC	0	0.00%		
average % Yes for all * categories = 31.67%				
ORGANIZATION/FORMAT				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
library name/logo each page	4	80.00%		

consistent style	4	80.00%		
use of lists	1	20.00%		
descriptive <heading> tags	1	20.00%		
average % Yes for all categories = 50.00%				
ACCESS FOR DIFFERENT USER GROUPS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
audio for vision impaired	0	0.00%		
multi language option	0	0.00%		
subject guides for different user groups	0	0.00%	2	40.00%
average % Yes for all categories = 0.00%				
ACCESS FOR DIFFERENT BROWSERS/SYSTEMS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
<alt> tags for navigational graphics *	2	100.00%	3	60.00%
functional in Netscape *	5	100.00%		
functional in Internet Explorer *	5	100.00%		
tables	4	80.00%		
navigational graphics	2	40.00%		
frames	0	0.00%		
text-only option *	0	0.00%		
no-frames option	0	----------	5	100.00%
average % Yes for all * categories = 75.00%				
BASIC LIBRARY INFORMATION				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
collection description *	5	100.00%		
hours *	4	80.00%		
contact info *	4	80.00%		
· address	3	60.00%		
· phone	3	60.00%		
· email	2	40.00%		
· fax	1	20.00%		
user groups indicated *	3	60.00%		
staff *	2	40.00%		
email link *	2	40.00%		
services and policies *	2	40.00%		
mission statement *	0	0.00%		
URL *	0	0.00%		
link list/SG for internet resources *	0	0.00%		
· annotations for internet resources	0	----------	5	100.00%
· IR classification explained	0	----------	5	100.00%
average % Yes for all * categories = 44.00%				
ADDITIONAL FEATURES				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
library image	3	60.00%		
other	3	60.00%		
subject guides for print resources	2	40.00%		
new book list	1	20.00%		
online rare book exhibit	1	20.00%		

library map	0	0.00%
online reference	0	0.00%
access to e-journals	0	0.00%
access to databases	0	0.00%
web catalog interface/link	0	0.00%
telnet catalog link	0	0.00%
library newsletter	0	0.00%
other what's new	0	0.00%
printable forms	0	0.00%
interactive forms	0	0.00%
password protected section	0	0.00%

Table 10. Collections 5,000 - 19,999 Volumes

BACKGROUND INFORMATION		
Library Type	**Frequency**	**Percentage**
botanical garden	3	30.00%
institute/research center	3	30.00%
academic	2	20.00%
arboretum	2	20.00%
society/association	2	20.00%
museum	1	10.00%
herbarium	0	0.00%
Total Libraries: 10		
Page Count: minimum=1 maximum=82 range=81 mean=14.1 mode=1 median=5		

AUTHORITY/CURRENCY/ACCURACY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
link to parent organization	10	100.00%		
correct spelling	8	80.00%		
author identified	7	70.00%		
update indicated	5	50.00%		
email link	4	40.00%		
external links functioning	2	33.33%	4	40.00%
copyright notice	3	30.00%		
average % Yes for all categories = 57.62%				
· updated in last year	2	20.00%		
· updated over 1 year ago	2	20.00%		
· updated in last 6 months	1	10.00%		
· updated in last week	0	0.00%		
· updated in last month	0	0.00%		

FEATURES TO PROMOTE INDEXING BY SEARCH ENGINES				
Category	**Yes**	**% Yes**	**N/A**	**%N/A**
descriptive <title> tags	7	70.00%		
metadata	3	30.00%		
average % Yes for all categories = 50.00%				

NAVIGATION/FUNCTIONALITY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
internal links functioning *	9	90.00%		
navigational links each page *	5	50.00%		
link to library home each page *	4	50.00%	2	20.00%
index page/ TOC	5	50.00%		
internal search engine	1	10.00%		
help option	0	0.00%		
guided tour	0	0.00%		
site map	0	0.00%		
average % Yes for all * categories = 63.33%				

ORGANIZATION/FORMAT				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
use of lists	6	60.00%		
consistent style	6	60.00%		
library name/logo each page	5	50.00%		
descriptive <heading> tags	3	30.00%		
average % Yes for all categories = 50.00%				

ACCESS FOR DIFFERENT USER GROUPS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
audio for vision impaired	0	0.00%		

multi language option	0	0.00%		
subject guides for different user groups	0	0.00%	2	20.00%
average % Yes for all categories = 0.00%				
ACCESS FOR DIFFERENT BROWSERS/SYSTEMS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
<alt> tags for navigational graphics *	7	100.00%	3	30.00%
functional in Netscape *	10	100.00%		
functional in Internet Explorer *	10	100.00%		
tables	8	80.00%		
navigational graphics	7	70.00%		
frames	0	0.00%		
text-only option *	0	0.00%		
no-frames option	0	---------	10	100.00%
average % Yes for all * categories = 75.00%				
BASIC LIBRARY INFORMATION				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
collection description *	10	100.00%		
hours *	10	100.00%		
contact info *	10	100.00%		
· phone	10	100.00%		
· address	8	80.00%		
· email	8	80.00%		
· fax	4	40.00%		
user groups indicated *	9	90.00%		
services and policies *	8	80.00%		
staff *	7	70.00%		
email link *	7	70.00%		
mission statement *	4	40.00%		
link list/SG for internet resources *	4	40.00%		
· annotations for internet resources	3	75.00%	6	60.00%
· IR classification explained	0	0.00%	6	60.00%
URL *	1	10.00%		
average % Yes for all * categories = 70.00%				
ADDITIONAL FEATURES				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
other	8	80.00%		
access to databases	5	50.00%		
library image	4	40.00%		
access to e-journals	4	40.00%		
web catalog interface/link	4	40.00%		
new book list	3	30.00%		
interactive forms	2	20.00%		
subject guides for print resources	1	10.00%		
online reference	1	10.00%		
other what's new	1	10.00%		
online rare book exhibit	1	10.00%		
printable forms	1	10.00%		
library map	0	0.00%		
telnet catalog link	0	0.00%		
library newsletter	0	0.00%		
password protected section	0	0.00%		

Table 11. Collections 20,000 - 99,999 Volumes

BACKGROUND INFORMATION		
Library Type	**Frequency**	**Percentage**
academic	3	50.00%
arboretum	2	33.33%
botanical garden	2	33.33%
herbarium	0	0.00%
institute/research center	0	0.00%
museum	0	0.00%
society/association	0	0.00%
Total Libraries: 6		
Page Count: minimum=1 maximum=30 range=29 mean=10.83 mode=1 median=2.5		

AUTHORITY/CURRENCY/ACCURACY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
correct spelling	6	100.00%		
link to parent organization	6	100.00%		
external links functioning	4	100.00%	2	33.33%
author identified	3	50.00%		
update indicated	3	50.00%		
copyright notice	2	33.33%		
email link	2	33.33%		
average % Yes for all categories = 66.67%				
· updated in last month	2	33.33%		
· updated in last 6 months	1	16.67%		
· updated in last week	0	0.00%		
· updated in last year	0	0.00%		
· updated over 1 year ago	0	0.00%		

FEATURES TO PROMOTE INDEXING BY SEARCH ENGINES				
Category	**Yes**	**% Yes**	**N/A**	**%N/A**
descriptive <title> tags	5	83.33%		
metadata	3	50.00%		
average % Yes for all categories = 66.67%				

NAVIGATION/FUNCTIONALITY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
internal links functioning *	6	100.00%		
navigational links each page *	5	83.33%		
link to library home each page *	3	75.00%	2	33.33%
index page/ TOC	3	50.00%		
internal search engine	1	16.67%		
help option	0	0.00%		
guided tour	0	0.00%		
site map	0	0.00%		
average % Yes for all * categories = 86.11%				

ORGANIZATION/FORMAT				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
library name/logo each page	6	100.00%		
descriptive <heading> tags	5	83.33%		
consistent style	4	66.67%		
use of lists	3	50.00%		
average % Yes for all categories = 75.00%				

ACCESS FOR DIFFERENT USER GROUPS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
audio for vision impaired	0	0.00%		
multi language option	0	0.00%		
subject guides for different user groups	0	0.00%	2	33.33%
average % Yes for all * categories = 0.00%				
ACCESS FOR DIFFERENT BROWSERS/SYSTEMS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
no-frames option *	1	100.00%	5	83.33%
<alt> tags for navigational graphics *	4	100.00%	2	33.33%
functional in Netscape *	6	100.00%		
functional in Internet Explorer *	6	100.00%		
tables	5	83.33%		
navigational graphics	4	66.67%		
frames	1	16.67%		
text-only option *	0	0.00%		
average % Yes for all * categories = 80.00%				
BASIC LIBRARY INFORMATION				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
collection description *	6	100.00%		
hours *	6	100.00%		
contact info *	6	100.00%		
· phone	6	100.00%		
· address	5	83.33%		
· fax	4	66.67%		
· email	4	66.67%		
services and policies *	6	100.00%		
user groups indicated *	4	66.67%		
email link *	4	66.67%		
staff *	3	50.00%		
URL *	2	33.33%		
link list/SG for internet resources *	1	16.67%		
· annotations for internet resources	0	0.00%	5	83.33%
· IR classification explained	0	0.00%	5	83.33%
mission statement *	0	0.00%		
average % Yes for all * categories = 63.33%				
ADDITIONAL FEATURES				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
other	6	100.00%		
telnet catalog link	3	50.00%		
subject guides for print resources	2	33.33%		
online reference	2	33.33%		
access to e-journals	2	33.33%		
access to databases	2	33.33%		
web catalog interface/link	2	33.33%		
other what's new	2	33.33%		
library image	1	16.67%		
online rare book exhibit	1	16.67%		
printable forms	1	16.67%		
library map	0	0.00%		
library newsletter	0	0.00%		
new book list	0	0.00%		
interactive forms	0	0.00%		
password protected section	0	0.00%		

Table 12. Collections 100,000+ Volumes

BACKGROUND INFORMATION		
Library Type	**Frequency**	**Percentage**
botanical garden	2	50.00%
arboretum	1	25.00%
academic	1	25.00%
society/association	1	25.00%
herbarium	1	25.00%
institute/research center	0	0.00%
museum	0	0.00%
Total Libraries: 4		
Page Count: minimum=1 maximum=209 range=208 mean=57.5 mode=n/a median=10		

AUTHORITY/CURRENCY/ACCURACY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
link to parent organization	4	100.00%		
author identified	3	75.00%		
copyright notice	2	50.00%		
correct spelling	2	50.00%		
email link	2	50.00%		
update indicated	1	25.00%		
external links functioning	0	0.00%	1	25.00%
average % Yes for all categories = 50.00%				
· updated over 1 year ago	1	25.00%		
· updated in last week	0	0.00%		
· updated in last month	0	0.00%		
· updated in last 6 months	0	0.00%		
· updated in last year	0	0.00%		

FEATURES TO PROMOTE INDEXING BY SEARCH ENGINES				
Category	**Yes**	**% Yes**	**N/A**	**%N/A**
descriptive <title> tags	4	100.00%		
metadata	3	75.00%		
average % Yes for all categories = 87.50%				

NAVIGATION/FUNCTIONALITY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
index page/ TOC	3	75.00%		
navigational links each page *	3	75.00%		
internal search engine	2	50.00%		
link to library home each page *	2	66.67%	1	25.00%
internal links functioning *	1	25.00%		
help option	0	0.00%		
guided tour	0	0.00%		
site map	0	0.00%		
average % Yes for all * categories = 55.56%				

ORGANIZATION/FORMAT				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
consistent style	3	75.00%		
library name/logo each page	3	75.00%		
use of lists	3	75.00%		
descriptive <heading> tags	1	25.00%		
average % Yes for all categories = 62.50%				

ACCESS FOR DIFFERENT USER GROUPS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
audio for vision impaired	0	0.00%		
multi language option	0	0.00%		
subject guides for different user groups	0	0.00%		
average % Yes for all categories = 0.00%				
ACCESS FOR DIFFERENT BROWSERS/SYSTEMS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
tables	4	100.00%		
functional in Internet Explorer *	4	100.00%		
navigational graphics	3	75.00%		
functional in Netscape *	3	75.00%		
<alt> tags for navigational graphics *	1	33.33%	1	25.00%
frames	1	25.00%		
no-frames option *	0	0.00%	3	75.00%
text-only option *	0	0.00%		
average % Yes for all * categories = 41.67%				
BASIC LIBRARY INFORMATION				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
collection description *	4	100.00%		
user groups indicated *	4	100.00%		
hours *	4	100.00%		
contact info *	4	100.00%		
· address	4	100.00%		
· phone	4	100.00%		
· email	4	100.00%		
· fax	2	50.00%		
email link *	4	100.00%		
services and policies *	4	100.00%		
link list/SG for internet resources *	3	75.00%		
· annotations for internet resources	1	33.33%	1	25.00%
· IR classification explained	0	0.00%	1	25.00%
staff *	2	50.00%		
mission statement *	0	0.00%		
URL *	0	0.00%		
average % Yes for all * categories = 72.50%				
ADDITIONAL FEATURES				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
other	4	100.00%		
library image	3	75.00%		
online reference	3	75.00%		
access to databases	3	75.00%		
web catalog interface/link	3	75.00%		
online rare book exhibit	3	75.00%		
access to e-journals	1	25.00%		
telnet catalog link	1	25.00%		
new book list	1	25.00%		
other what's new	1	25.00%		
library map	0	0.00%		
subject guides for print resources	0	0.00%		
library newsletter	0	0.00%		
printable forms	0	0.00%		
interactive forms	0	0.00%		
password protected section	0	0.00%		

Table 13. 1 Page Sites

BACKGROUND INFORMATION				
Library Type			**Frequency**	**Percentage**
botanical garden			6	46.15%
society/association			4	30.77%
museum			1	7.69%
arboretum			1	7.69%
academic			1	7.69%
herbarium			1	7.69%
institute/research center			0	0.00%
Total Libraries: 13				
AUTHORITY/CURRENCY/ACCURACY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
correct spelling	11	84.62%		
link to parent organization	11	84.62%		
external links functioning	2	66.67%	10	76.92%
author identified	8	61.54%		
copyright notice	7	53.85%		
email link	5	38.46%		
update indicated	4	30.77%		
average % Yes for all categories = 60.08%				
· updated over 1 year ago	3	23.08%		
· updated in last 6 months	1	7.69%		
· updated in last week	0	0.00%		
· updated in last month	0	0.00%		
· updated in last year	0	0.00%		
FEATURES TO PROMOTE INDEXING BY SEARCH ENGINES				
Category	**Yes**	**% Yes**	**N/A**	**%N/A**
descriptive <title> tags	9	69.23%		
metadata	5	38.46%		
average % Yes for all categories = 53.85%				
NAVIGATION/FUNCTIONALITY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
internal links functioning *	9	81.82%	2	15.38%
navigational links each page *	9	69.23%		
internal search engine	1	7.69%		
index page/ TOC	1	7.69%		
link to library home each page	0	-------	13	100.00%
help option	0	0.00%		
guided tour	0	0.00%		
site map	0	0.00%		
average % Yes for all * categories = 75.53%				
ORGANIZATION/FORMAT				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
consistent style	13	100.00%		

library name/logo each page	11	84.62%		
descriptive <heading> tags	4	30.77%		
use of lists	2	15.38%		
average % Yes for all categories = 57.69%				
ACCESS FOR DIFFERENT USER GROUPS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
audio for vision impaired	0	0.00%		
multi language option	0	0.00%		
subject guides for different user groups	0	0.00%	7	53.85%
average % Yes for all categories = 0.00%				
ACCESS FOR DIFFERENT BROWSERS/SYSTEMS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
functional in Netscape *	13	100.00%		
functional in Internet Explorer *	13	100.00%		
<alt> tags for navigational graphics *	6	85.71%	6	46.15%
tables	10	76.92%		
navigational graphics	7	53.85%		
frames	0	0.00%		
no-frames option	0	---------	13	100.00%
text-only option *	0	0.00%		
average % Yes for all * categories = 71.43%				
BASIC LIBRARY INFORMATION				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
collection description *	12	92.31%		
hours *	10	76.92%		
contact info *	10	76.92%		
· phone	10	76.92%		
· address	7	53.85%		
· email	6	46.15%		
· fax	4	30.77%		
services and policies *	8	61.54%		
user groups indicated *	7	53.85%		
email link *	6	46.15%		
staff *	4	30.77%		
mission statement *	2	15.38%		
URL *	2	15.38%		
link list/SG for internet resources *	0	0.00%	11	84.62%
· annotations for internet resources	0	0.00%	13	100.00%
· IR classification explained	0	0.00%	13	100.00%
average % Yes for all * categories = 46.92%				

Table 14. 2-5 Page Sites

BACKGROUND INFORMATION		
Library Type	**Frequency**	**Percentage**
academic	4	50.00%
arboretum	2	25.00%
institute/research center	3	37.50%
botanical garden	1	12.50%
museum	1	12.50%
herbarium	0	0.00%
society/association	0	0.00%
Total Libraries: 8		

AUTHORITY/CURRENCY/ACCURACY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
link to parent organization	8	100.00%		
correct spelling	7	87.50%		
author identified	5	62.50%		
update indicated	5	62.50%		
copyright notice	4	50.00%		
email link	3	37.50%		
external links functioning	3	50.00%	2	25.00%
average % Yes for all categories = 64.29%				
· updated in last year	2	25.00%		
· updated over 1 year ago	2	25.00%		
· updated in last month	1	12.50%		
· updated in last week	0	0.00%		
· updated in last 6 months	0	0.00%		

FEATURES TO PROMOTE INDEXING BY SEARCH ENGINES				
Category	**Yes**	**% Yes**	**N/A**	**%N/A**
descriptive <title> tags	7	87.50%		
metadata	1	12.50%		
average % Yes for all categories = 50.00%				

NAVIGATION/FUNCTIONALITY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
internal links functioning *	6	75.00%		
link to library home each page *	5	62.50%		
navigational links each page *	4	50.00%		
index page/ TOC *	3	37.50%		
internal search engine	1	12.50%		
help option	0	0.00%		
guided tour	0	0.00%		
site map	0	0.00%		
average % Yes for all * categories = 56.25%				

ORGANIZATION/FORMAT				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
consistent style	6	75.00%		
library name/logo each page	6	75.00%		
use of lists	5	62.50%		
descriptive <heading> tags	4	50.00%		

average % Yes for all categories = 65.63%

ACCESS FOR DIFFERENT USER GROUPS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
audio for vision impaired	0	0.00%		
multi language option	0	0.00%		
subject guides for different user groups	0	0.00%	1	12.50%
average % Yes for all categories = 0.00%				

ACCESS FOR DIFFERENT BROWSERS/SYSTEMS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
functional in Internet Explorer *	8	100.00%		
functional in Netscape *	7	87.50%		
<alt> tags for navigational graphics *	5	83.33%	2	25.00%
tables	6	75.00%		
navigational graphics	6	75.00%		
frames	0	0.00%		
text-only option *	0	0.00%		
no-frames option	0	---------	8	100.00%
average % Yes for all * categories = 67.71%				

BASIC LIBRARY INFORMATION				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
contact info *	8	100.00%		
· phone	8	100.00%		
· email	8	100.00%		
· address	6	75.00%		
· fax	5	62.50%		
collection description *	7	87.50%		
user groups indicated *	7	87.50%		
hours *	7	87.50%		
email link *	7	87.50%		
staff *	6	75.00%		
services and policies *	6	75.00%		
mission statement *	2	25.00%		
link list/SG for internet resources *	2	25.00%		
· annotations for internet resources	1	50.00%	6	75.00%
· IR classification explained	0	0.00%	6	75.00%
URL *	1	12.50%		
average % Yes for all * categories = 66.25%				

Table 15. 6 - 9 Page Sites

BACKGROUND INFORMATION		
Library Type	**Frequency**	**Percentage**
institute/research center	3	60.00%
museum	2	40.00%
botanical garden	1	20.00%
academic	1	20.00%
arboretum	0	0.00%
herbarium	0	0.00%
society/association	0	0.00%
Total Libraries: 5		

AUTHORITY/CURRENCY/ACCURACY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
link to parent organization	5	100.00%		
author identified	4	80.00%		
correct spelling	4	80.00%		
email link	3	60.00%		
update indicated	3	60.00%		
external links functioning	2	40.00%		
copyright notice	1	20.00%		
average % Yes for all categories = 62.86%				
· updated in last year	2	40.00%		
· updated in last 6 months	1	20.00%		
· updated in last week	0	0.00%		
· updated in last month	0	0.00%		
· updated over 1 year ago	0	0.00%		

FEATURES TO PROMOTE INDEXING BY SEARCH ENGINES				
Category	**Yes**	**% Yes**	**N/A**	**%N/A**
descriptive <title> tags	5	100.00%		
metadata	5	100.00%		
average % Yes for all categories = 100.00%				

NAVIGATION/FUNCTIONALITY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
navigational links each page *	5	100.00%		
link to library home each page *	4	80.00%		
index page/ TOC *	4	80.00%		
internal links functioning *	3	60.00%		
internal search engine	1	20.00%		
site map *	1	20.00%		
help option *	0	0.00%		
guided tour	0	0.00%		
average % Yes for all * categories = 56.67%				

ORGANIZATION/FORMAT				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
consistent style	5	100.00%		
library name/logo each page	3	60.00%		

descriptive <heading> tags	3	60.00%		
use of lists	3	60.00%		
average % Yes for all categories = 70.00%				
ACCESS FOR DIFFERENT USER GROUPS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
audio for vision impaired	0	0.00%		
multi language option	0	0.00%		
subject guides for different user groups	0	0.00%	2	40.00%
average % Yes for all categories = 0.00%				
ACCESS FOR DIFFERENT BROWSERS/SYSTEMS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
navigational graphics	5	100.00%		
functional in Netscape *	5	100.00%		
functional in Internet Explorer *	5	100.00%		
tables	3	60.00%		
frames	2	40.00%		
<alt> tags for navigational graphics *	1	20.00%		
text-only option *	1	20.00%		
no-frames option *	0	0.00%	3	60.00%
average % Yes for all * categories = 48.00%				
BASIC LIBRARY INFORMATION				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
contact info *	5	100.00%	0	0.00%
· address	4	80.00%	0	0.00%
· email	4	80.00%	0	0.00%
· phone	3	60.00%	0	0.00%
· fax	2	40.00%	0	0.00%
link list/SG for internet resources *	5	100.00%	0	0.00%
· annotations for internet resources	4	80.00%	0	0.00%
· IR classification explained	0	0.00%	0	0.00%
email link *	4	80.00%	0	0.00%
collection description *	3	60.00%	0	0.00%
user groups indicated *	3	60.00%	0	0.00%
hours *	3	60.00%	0	0.00%
staff *	3	60.00%	0	0.00%
URL *	2	40.00%	0	0.00%
services and policies *	2	40.00%	0	0.00%
mission statement *	0	0.00%	0	0.00%
average % Yes for all * categories = 60.00%				

Table 16. 10+ Page Sites

BACKGROUND INFORMATION				
Library Type			**Frequency**	**Percentage**
academic			4	36.36%
arboretum			4	36.36%
botanical garden			3	27.27%
herbarium			1	9.09%
institute/research center			1	9.09%
museum			1	9.09%
society/association			1	9.09%
Total Libraries: 11				
AUTHORITY/CURRENCY/ACCURACY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
link to parent organization	10	100.00%	1	9.09%
author identified	10	90.91%		
email link	8	72.73%		
correct spelling	6	54.55%		
update indicated	6	54.55%		
external links functioning	5	50.00%	1	9.09%
copyright notice	3	27.27%		
average % Yes for all categories = 64.29%				
· updated in last 6 months	3	27.27%		
· updated in last week	1	9.09%		
· updated in last month	1	9.09%		
· updated in last year	1	9.09%		
· updated over 1 year ago	0	0.00%		
FEATURES TO PROMOTE INDEXING BY SEARCH ENGINES				
Category	**Yes**	**% Yes**	**N/A**	**%N/A**
descriptive <title> tags	10	90.91%		
metadata	6	54.55%		
average % Yes for all categories = 72.73%				
NAVIGATION/FUNCTIONALITY				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
index page/ TOC *	9	81.82%		
navigational links each page *	6	54.55%		
link to library home each page *	6	54.55%		
internal links functioning *	6	54.55%		
internal search engine *	1	9.09%		
help option *	0	0.00%		
guided tour	0	0.00%		
site map *	0	0.00%		
average % Yes for all * categories = 36.37%				
ORGANIZATION/FORMAT				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
use of lists	8	72.73%		
descriptive <heading> tags	6	54.55%		

library name/logo each page	5	45.45%		
consistent style	4	36.36%		
average % Yes for all categories = 52.27%				
ACCESS FOR DIFFERENT USER GROUPS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
audio for vision impaired	0	0.00%		
multi language option	0	0.00%		
subject guides for different user groups	0	0.00%	4	36.36%
average % Yes for all categories = 0.00%				
ACCESS FOR DIFFERENT BROWSERS/SYSTEMS				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
functional in Internet Explorer *	11	100.00%		
tables	10	90.91%		
functional in Netscape *	10	90.91%		
<alt> tags for navigational graphics *	8	88.89%	2	18.18%
navigational graphics	9	81.82%		
no-frames option *	1	50.00%	9	81.82%
frames	2	18.18%		
text-only option *	0	0.00%		
average % Yes for all * categories = 65.96%				
BASIC LIBRARY INFORMATION				
Category	**Yes**	**% Yes**	**N/A**	**% N/A**
collection description *	11	100.00%		
hours *	11	100.00%		
staff *	11	100.00%		
email link *	11	100.00%		
URL *	11	100.00%		
contact info *	10	90.91%		
· phone	9	81.82%		
· fax	9	81.82%		
· address	5	45.45%		
· email	2	18.18%		
services and policies *	10	90.91%		
user groups indicated *	8	72.73%		
link list/SG for internet resources *	8	72.73%		
· annotations for internet resources	3	37.50%	3	27.27%
· IR classification explained	0	0.00%	3	27.27%
mission statement *	2	18.18%		
average % Yes for all * categories =84.55%				

APPENDIX C

LIBRARY WEB SITES EVALUATED

AABGA Resource Center
http://www.aabga.org/rc/search.cfm

Andersen Horticultural Library
http://www.arboretum.umn.edu/library/index.htm

Arnold Arboretum Library & Archives
http://arboretum.harvard.edu/lib.htm

Bailey Hortorium Library
http://www.bio.cornell.edu/hortorium/hortlibe.html

Blaksley Library
http://www.sbbg.org/library.htm

Botanical Research Institute of Texas Oliver G. Burk Library
http://www.brit.org/burk/ http://www.brit.org/burk.edu6/html

Boyce Thompson Institute for Plant Research Library
http://bti.cornell.edu/lib/btilib.html

Brooklyn Botanic Garden Science Library
http://www.bbg.org/goingson/library.html

Cherokee Garden Library
http://www.atlhist.org/archives/html/chergardlibrary.htm

Couch Biology Library - Botany Section
http://www.lib.unc.edu/biology/index.html

Dumbarton Oaks Garden Library
http://www.doaks.org/Libraries.html

Elizabeth C. Miller Horticulture Library
http://depts.washington.edu/hortlib/

Frank Good Library
http://www.botanica.org/library.html

Harvard University Botany Libraries
http://www.herbaria.harvard.edu/Libraries/libraries.html

Helen Crocker Russell Library of Horticulture
http://www.strybing.org/library/index.html

Helen Fowler Library
http://www.botanicgardens.org/library.htm

Horace Hammond Memorial Library
http://www.bbgardens.org/Library/library.htm

Horticultural Society of New York Library
http://newyork.citysearch.com/E/V/NYCNY/0006/01/15/5.html

Hunt Botanical Library
http://huntbot.andrew.cmu.edu/HIBD/HI-Library.html

Lawrence Newcomb Library
http://www.newfs.org/library.html

Lloyd Library & Museum
http://www.libraries.uc.edu/lloyd/

LuEster T. Mertz Library
http://www.nybg.org/bsci/libr/

Massachusetts Horticultural Society Library
http://www.masshort.org/library.htm

McLean Library of the Pennsylvania Horticultural Society
http://www.libertynet.org/phs/phslibrary.html

Missouri Botanical Garden Library
http://www.mobot.org/MOBOT/molib/

Paul Evans Library of Fruit Science
http://library.smsu.edu/paulevans/pelindex.htm

Rancho Santa Ana Botanic Garden Research Library
http://www.cgu.edu/inst/rsa/library/

Richter Memorial Library
http://www.dbg.org/6/library.html

Selby Reference Library
http://www.selby.org/Library/index.htm

Smithsonian Institution Libraries Botany Branch
http://www.sil.si.edu/Branches/botany-hp.htm

Smithsonian Institution Libraries Horticulture Branch
http://www.sil.si.edu/Branches/horti-hp.htm

Sterling Morton Library
http://www.mortonarb.org/plantinfo/sterlinglibrary/index.html

University of Florida Herbarium Library
http://www.flmnh.ufl.edu/natsci/herbarium/lib/

University of Minnesota Plant Pathology Library
http://www.lib.umn.edu/plant/

UW-Madison Plant Pathology Library
http://www.plantpath.wisc.edu/library/

Warren H. Corning Library
http://www.holdenarb.org/library.htm

Rare Books & Artwork at the Holden Arboretum (Warren H. Corning Library)
http://members.aol.com/stanley177/rarbk2.htm

APPENDIX D

LIBRARY TYPE CATEGORIZATIONS

Academic Libraries
Andersen Horticultural Library
Arnold Arboretum Library & Archives
Bailey Hortorium Library
Couch Biology Library - Botany Section
Harvard University Botany Libraries
Paul Evans Library of Fruit Science
Rancho Santa Ana Botanic Garden Research Library
University of Florida Herbarium Library
University of Minnesota Plant Pathology Library
UW-Madison Plant Pathology Library

Arboretum Libraries
Andersen Horticultural Library
Arnold Arboretum Library & Archives
Harvard University Botany Libraries
Helen Crocker Russell Library of Horticulture
Rare Books & Artwork at the Holden Arboretum (Corning Library)
Sterling Morton Library
Warren H. Corning Library

Botanical Garden Libraries
Blaksley Library - Santa Barbara Botanic Garden
Brooklyn Botanic Garden Science Library
Frank Good Library
Helen Crocker Russell Library of Horticulture
Helen Fowler Library
Horace Hammond Memorial Library
LuEster T. Mertz Library
Missouri Botanical Garden Library
Rancho Santa Ana Botanic Garden Research Library
Richter Memorial Library
Selby Reference Library

Herbarium Libraries
Harvard University Botany Libraries
University of Florida Herbarium Library

Institute/Research Center Libraries
Botanical Research Institute of Texas Oliver G. Burk Library
Boyce Thompson Institute Library
Dumbarton Oaks Garden Library
Elizabeth C. Miller Horticulture Library
Hunt Botanical Library
Smithsonian Institution Libraries Botany Branch
Smithsonian Institution Libraries Horticulture Branch

Museum Libraries
Cherokee Garden Library
Dumbarton Oaks Garden Library
Lloyd Library & Museum
Smithsonian Institution Libraries Botany Branch
Smithsonian Institution Libraries Horticulture Branch

Society/Association Libraries
AABGA Resource Center
Horticultural Society of New York Library
Lawrence Newcomb Library
Massachusetts Horticultural Society Library
McLean Library of the Pennsylvania Horticultural Society

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